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ABSTRACT

As one segment of a larger study of the barriers faced by women in the schools of eight health professions, the study on dentistry had as its central purpose the identification of any characteristics of the profession that affect the role and status of women in dentistry and in dental schools. Information was gathered through interviews with administrators, faculty, and students of the schools. From this information and from statistical and historical data are drawn the report's three principal components: (1) an overview of the profession's history, work focus, and organization, and the role and status of women within it; (2) a set of recommendations addressing the unique problems faced by women, that can best be dealt with by the schools or the professional associations; and (3) extensive use of direct quotes giving a vivid description of the barriers women applicants and students face in dental schools. Some statistical tables are included. (MSE)

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AN EXPLORATORY STUDY OF WOMEN IN THE HEALTH PROFESSIONS SCHOOLS

VOLUME IV: DENTISTRY

U S DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

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WOMEN'S ACTION PROGRAM
Department of Health, Education, and Welfare

EXPLORATORY STUDY OF WOMEN IN THE HEALTH PROFESSIONS SCHOOLS

VOLUME IV: WOMEN IN DENTISTRY

Prepared for

The Women's Action Program
Office of Special Concerns
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Prepared by

URBAN AND RURAL SYSTEMS ASSOCIATES (URSA)
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I've had a feeling since I've been in dental school that people were watching me and wondering, you know, 'Can she do it?' 'Are the women going to make it?' in ways that they don't watch and wonder about the men. And I've kind of had a feeling that I don't want to flub up anything because I'm carrying the weight of women's credibility on my shoulders. I don't ever want to make a mistake that would make people say, 'Well, she's just a dumb broad.' (Group interview, mixed years, female)

It's hard to really put a finger on it, but one of the things that I think would be outstanding is that perhaps there's a greater dedication, or maybe a greater motivation in the female students generally than in the male students. I'm thinking that in the male student body, you can identify groups of students who are inspired or are highly motivated; there are identifiable groups who are marginally motivated and then there are maybe a few that can be positively identified who are trying to get through with the least amount of effort...I wouldn't want to call them playboys, but they have other interests and though they manage to survive in dental school, they're not putting out their best effort...With women generally--I have yet to see...a woman student who is seeking to get by who has other interests. It doesn't matter how much pressure she may be receiving...they are able to maintain very good grades--good standing in school. (Administrator, male)

PREFACE

The Exploratory Study of Women in the Health Professions Schools was conducted by Urban and Rural Systems Associates (URSA) for the Women's Action Program (WAP) of the Department of Health, Education, and Welfare (HEW) under Contract Number HEW-OS-74-291. The study focuses on eight health professions generally known and referred to as the MODVOPPP professions: medicine, osteopathic medicine, dentistry, veterinary medicine, optometry, podiatry, pharmacy, and public health.

Study Purpose

The study's central tasks have been to identify and explore the barriers to success which women face as MODVOPPP school applicants and students and to describe the discrimination process, if any, which limits women's entry into these health professions. Its central purpose--indeed its primary product--has been the development of conceptual models of the recruitment, admissions, and education systems designed to maximize equal opportunities for women and to encourage their success as school applicants and students in the MODVOPPP professions. The models are the basis for guidance and recommendations intended to assist HEW, the MODVOPPP educational and professional associations, the MODVOPPP schools, and appropriate others to eliminate barriers women face and/or to minimize their impact.

Study Design and Methods

The study was purposefully exploratory in its design. According to the Request for Proposal (RFP) which resulted in the contract, "The exploratory approach taken for this study is based upon the realization that not enough is known about the process of discrimination to permit more systematic research, or to assess alternative forms of intervention designed to achieve equal opportunity based on sex." A common purpose of exploratory studies is to identify and raise issues important to an understanding of a topic under investigation. The power of exploratory research is to illuminate issues in settings and systems which are complex and where simple variables and variable clusters are inadequate

to explain and establish causal relationships. Thus exploratory studies do not normally test hypotheses, they generate them. Their purpose is not to quantify the frequency, magnitude, or distribution of events or phenomena, nor do they measure statistical correlations among events or between events and characteristics of people, institutions, professions, or other categories of systems variables. Rather their purpose is often to define complex systems through descriptive or predictive models which may be subjected to a variety of tests or evaluations in subsequent stages of research. This study's goal of developing success models for women as applicants to and students in the MODVOPPP health professions schools was thus the basis for selecting an exploratory study design.

URSA implemented the design by collecting and analyzing extensive data about the MODVOPPP professions and schools and other pertinent topics and issues. Information was gathered from the following sources:

- Interviews with almost 600 individual MODVOPPP school administrators, faculty members, and students in 27 MODVOPPP schools around the country. These were open-ended, purposefully unstructured interviews designed to surface the widest possible range of issues from a broad spectrum of respondents. They were supplemented by over 60 group interviews in which an estimated 440 men and women students participated.
- Interviews and correspondence with staff members of the professional association, student association, women's professional association, and/or association of schools and colleges in each of the MODVOPPP professions.
- Written documents prepared by and collected from the MODVOPPP schools and associations such as recruitment brochures, school catalogues, financial aid (loan and scholarship) programs and policies, school admissions committee procedures, descriptions and instructions for use of centralized application services, and so on.
- The professions' various current and, when available, historic journals.

- Available statistics on the professions' practitioners, schools, applicants, and students.
- Interviews, correspondence, and meetings with individuals and groups conducting special studies and research in and about the professions, about women in the professions, sex role behavior and learning, and other related topics; and surveys of available studies, research, and relevant literature in these areas.
- Interviews, correspondence, and meetings with representatives of HEW health policy and program agencies and reviews of pertinent federal legislation, regulations, guidelines, and other documents related to health education policy and programs.

All of this information was subjected to qualitative forms of analysis intended to identify conflict and consensus among various sources of information regarding barriers women face as MODVOPPP applicants and students and to identify exemplary policies and programs sponsored by MODVOPPP schools and associations which appeared to eliminate and/or minimize the impact of these barriers. These analyses were the basis for developing the recruitment, admissions, and education models called for by the contract.

Scope of Study Research: Variations Among the MODVOPPP Professions

MODVOPPP students and schools are all designated as potential recipients of federal financial aid under the Comprehensive Health Manpower Training Act of 1971 (PL 92-157) Public Health Service Act; and schools receiving assistance under the Act are subject to its Title VII affirmative action and non-discrimination requirements.

Inclusion in this Act is the common basis on which the MODVOPPP professions were included in this study. Beyond this common feature, however, and the obvious fact that the MODVOPPP professions are all health professions, preliminary study research suggested that in many significant ways the professions are more different than they are similar and that these differences might have great significance for women as applicants to and students in the schools. The

MODVOPPP professions vary greatly in size, for example, with the largest, medicine, having well over 300,000 active practitioners and the smallest, podiatry, having barely more than 7,000. This variation also appears in the number of operational training institutions with medicine having over 100 schools and podiatry only five. The professions differ in public visibility and general knowledge. Everyone knows of doctors, dentists, and veterinarians and knows generally what they do. Not everyone knows what DOs (doctors of osteopathic medicine) or podiatrists are or what they do. Some of the professions are clearly defined as and accorded the social status and other rewards of a profession while others, in the public view, may be more often thought of as a good occupation or a good business. To some extent varying public definitions of profession vs. occupation vs. business reflect different practice patterns and organization. Some of the professions--for example, optometry--are more often practiced in entrepreneurial business forms such as solo or partnership practice than others such as public health which includes opportunities for practice in schools, hospitals, health departments, and other employer institutions.

Variations in professional training are also great. A first professional degree sufficient for practice is possible in some sections in public health within a year; in medicine the minimum is normally five years and the average, depending on specialty selection, much longer. Cost of training varies. Entry requirements to the schools vary. Curriculum content and structure among professions vary.

Finally, and most obviously, the presence of women as practitioners and as students, both historically and currently, varies enormously among the eight MODVOPPP professions, and some are much more heavily sex-typed than others. In pharmacy, for example, about 9% of the active practitioners were women in 1970; however, increasing enrollments of women in schools of pharmacy resulted in women representing 24% of first year enrollments in 1970-71. By contrast, women represented only 3% of active dentists in 1970 and only 2% of first year enrollments in 1970-71.

These most obvious differences among the professions--and others not so obvious--led the URSA study team to conclude that a portion of our research effort must be devoted to an examination of each of the MODVOPPP professions singly and as a separate and distinct social system with its own particular history, forms of practice, professional and training institutions, and practitioners and students. The purpose of conducting eight "mini-studies" on the MODVOPPP professions was to identify any characteristics of each profession--its history, organization, and other important features--which might contribute to an understanding of the role and status of women in that profession and to an identification of the barriers women face as applicants to and students in the profession's schools.

Organization and Contents of the Final Report(s)

As a result of our decision to conduct these studies of each MODVOPPP profession, the study's findings, conclusions, and recommendations are reported in a ten-volume final report. The ten volumes are:

VOLUME I:	Part 1:	DATA ANALYSIS, FINDINGS, CONCLUSIONS, RECOMMENDATIONS
	Part 2:	APPENDICES
VOLUME II:	MEDICINE	
VOLUME III:	OSTEOPATHIC MEDICINE	
VOLUME IV:	DENTISTRY	
VOLUME V:	VETERINARY MEDICINE	
VOLUME VI:	OPTOMETRY	
VOLUME VII:	PODIATRY	
VOLUME VIII:	PHARMACY	
VOLUME IX:	PUBLIC HEALTH	
VOLUME X:	ANNOTATED BIBLIOGRAPHY	

VOLUME I includes a discussion of the study's major findings regarding barriers women face as applicants to and students in the MODVOPPP professions. It presents the recruitment, admissions, and education models which are designed to eliminate those barriers. It suggests a series of further research and action

recommendations for attention by HEW, the MODVOPPP professional and educational associations, and the MODVOPPP schools. VOLUME I also presents a detailed description of the study's methods.

The several Appendices to VOLUME I include samples of the study's data collection and analysis instruments; a summary of the major issues raised by men and women students in group interviews; financial aid sources, policies, and problems students experience; a survey of the roles and status of women in the MODVOPPP professional associations; statistical tables used by the URSA study team in conjunction with field interview and document review data; and a discussion of data gaps confronting the researcher in the MODVOPPP health professions with recommendations regarding data needs. In this regard, it is important to note and to stress that both the relative absence of minorities in the MODVOPPP schools and professions coupled with the absence of statistical data about applicants, students, and practitioners available by both race and sex simultaneously has necessarily limited the findings and conclusions in this study to Caucasian women. To prevent such research limitations in the future, one of our most urgent data recommendations is that statistical data always be made available and presented by both minority status and sex together rather than singly.

VOLUMES II-IX, the individual MODVOPPP professions reports, are designed to serve as a brief introduction to each profession--an introduction which gives a sense of the profession's history, work focus, organization, and women's roles and status in it. The study's ANNOTATED BIBLIOGRAPHY, VOLUME X, includes a list of the major bibliographic sources used in our research and preparation of all of the study's reports.

Taken as a group, the eight individual professions' studies and reports include the bulk of the total study's findings and are the collective basis for the conclusions and recommendations presented in VOLUME I, DATA ANALYSIS, FINDINGS, CONCLUSIONS, RECOMMENDATIONS. Under optimal circumstances, each individual profession's report should be read in combination with and after VOLUME I. However, in anticipation of the possibility that individual profession's

volumes may be read alone, there is a certain amount of repetition and duplication of information among the eight professions reports and between them and VOLUME I.

In addition to serving as an introduction to each profession, VOLUMES II-IX also have two other purposes. First, each of the individual reports includes a short set of recommendations designed to address some of the problems women experience which are unique or particular to the profession and which are best considered for implementation by either the schools directly or by the profession's various key associations.

Second, the extensive use of direct quotes from our field interviews with administrator, faculty, and student respondents in school site visits provides a vivid description of women students' experiences in the male-oriented environments of the MODVOPPP health professional schools; the extent to which these experiences are unique to women and not shared by male students; and the extent to which these experiences serve as barriers to women as applicants to and students in the schools. Collectively these reports of women's experiences also demonstrate that in spite of the very real and significant size, structural, work, and practice differences among the eight MODVOPPP professions, women's experiences in these professions and their schools are more similar than they are different in many important ways.

WOMEN IN DENTISTRY

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I. OVERVIEW

The profession of dentistry is well known to the American public. The dentist is a medical practitioner whose focus in the maintenance and restoration of health and normal function of the oral cavity and associated structures. The term oral cavity is significant, since the public generally associates the dentist's work with teeth and does not include the soft tissue and underlying bone structures. The general practitioner (87% of all practitioners) (7) is licensed to prescribe and administer drugs and to perform surgery.

Dentistry is one of the most heavily sex-typed of the MODVOPPP professions. It is the third largest of the professions with 102,220 practitioners in 1974, but it has the lowest proportion of women (3.2%) with the exception of optometry (2.1%) which is a considerably smaller and less visible profession (see Table 1).

The fact that women so rarely appear in the dental profession in this country is surprising given the role that women play in dentistry in other countries. Dentistry is a predominantly female profession in the USSR, Poland, Denmark, and Finland, and women participate in substantial numbers in Israel, Sweden, and France. (See Table 17, p. 22.) The infrequent participation of women in the profession in the United States eludes simple explanation, particularly in light of the nature of professional work in dentistry. Many of the features of professional health care which are often cited as making the work inappropriate for women, and which do in fact make the work difficult to combine with women's family responsibilities as they are currently defined, do not exist in dentistry. Working hours can be more readily controlled in dentistry than in many other professions; the general absence of life or death issues eliminates the pressures and unpredictability of work present in other professions; and one's practice can be located in or near the home as it is relatively independent of ancillary health care facilities. In these respects dentistry would appear to be a very attractive and obvious professional choice for women interested in a health career which combines well with their traditional family roles.

TABLE 1

NUMBER AND PERCENT OF ACTIVE PRACTITIONERS IN MODVOPPP HEALTH PROFESSIONS BY SEX: DECEMBER 31, 1970

	MEDICINE	OSTEOPATHIC MEDICINE	DENTISTRY	VETERINARY MEDICINE	OPTOMETRY	PODIATRY	PHARMACY	PUBLIC HEALTH
Total	311,210	12,000	102,220	25,920	18,440	7,100	129,290	N/A
Men	289,736	11,148	98,950	24,600	18,050	6,800	117,620	N/A
Women	21,474	852	3,270	1,320	390	300	11,670	N/A
% Men	93.1	92.9[a]	96.8	94.9	97.9	96.0	91.0	N/A
% Women	6.9	7.1[a]	3.2	5.1	2.1	4.0	9.0	N/A

SOURCE: *The Supply of Health Manpower, 1970 Profiles and Projections to 1990, Division of Manpower Intelligence, Bureau of Health Resources Development, Health Resources Administration, Public Health Service, Department of Health, Education and Welfare, 1974.*

[a] *Percentages estimated from subtracting DOs from MDs with MDs by sex in Women in Health Careers: Status of Women in Health Careers in the United States and Other Selected Countries, Chart Book for International Conference on Women in Health, The American Public Health Association, 1975.*

In some of the other MODVOPPP professions in which few women are found such as podiatry and osteopathic medicine, their absence is often attributed to the professions' low public visibility and thus the lesser likelihood that many women would even know enough about them to consider them as professional career options. Since dentistry does not suffer from low public visibility, some observers have suggested as an alternative explanation that our public image or stereotype of dentistry and its work is male. We think of dentists as men and believe that the work requires masculine strength, endurance, and stamina. Thus, this reasoning continues, women do not even consider dentistry as a possible profession. While this may explain some of the traditional absence of women dental applicants and students, by itself it is an insufficient explanation since veterinary medicine, for example, has traditionally displayed an even stronger masculine image, and yet the representation of women in the profession's applicant pools and schools has risen dramatically in recent years.

The small proportion of women in the dental schools and profession is also beginning to change, however. The number of women enrolled in dental schools has been increasing significantly from year to year for the past four years. The increase in women's applications and admissions has been both sudden and dramatic. Women comprised 3.2% of the fourth year class in 1974-75, for example, but 11.2% of the entering class in that same year (see Table 3, p. 10). The American Dental Association and most people we interviewed in this study predict that this trend of increased in women dental applicants and students will continue. (8)

The profession of dentistry differs from the other MODVOPPP professions in several significant respects. It has only recently, and in a very limited fashion, begun to be included in group health care plans and other forms of third-party coverage. While most of the other MODVOPPP professions have fought hard for such inclusion, dentistry apparently has not. A possible explanation for this is the fact that dentistry is one of the few remaining professions in which the dominant image is that of the individual entrepreneur. The practice mode of solo practitioner, who is thus also a small business-person, working alone at his or her craft has only recently been somewhat modified by practice and research in institutional settings such as hospitals or Health Maintenance Organizations (HMOs).

The fact that the profession is primarily practiced in isolation from other dentists or health professionals has meant that the professional functions of research, collegial contact and interaction, and continuing education depend more heavily than in most MODVOPPP professions on the professional networks--both formal and informal, national and local. The formal association network is heavily and importantly supplemented by informal contacts such as those provided through the detail men representing dental supply companies and through dental fraternity ties. These formal and informal networks are key to the profession and its operations.

Dental education is also unique in some ways. As dental education is currently structured, it appears to operate primarily to prepare practitioners for the traditional solo practice mode. Many of the professional's character traits and styles of operation appropriate to this practice mode appear to be addressed by the pedagogy of dental training although by no means in a conscious, planned, or deliberate way. We have found the dental education process to be one of unremitting stress, for example. Our field interview data suggests that the dominant lab and clinical pedagogy involves a sequence of setting a task for students to perform with minimum prior or in-process demonstration, explanation, or task examples or models; reviewing and critiquing the students' work, sometimes quite harshly; and instructing that the work be re-done, perhaps several times, but typically without extensive, and occasionally without any, explanation or information regarding what was done correctly/incorrectly, well or poorly each time. While students view this as a harsh, non-supportive style of education, it may be appropriate when viewed in terms of the professional work to come.

This demanding process seems to generate a camaraderie among the students which may help them to create and maintain friendship ties through to the isolated practice years to come. The rigor of the process may also operate to internalize in students high work standards which will continue in practice despite the absence of close working peers to view and comment on one's work. And the apparently common practice of requiring that students identify and analyze flaws in their work by commenting little on their efforts may operate to train students to solve problems without the frequent and immediate consultation of professional peers--something which they will have to do most often in solo practice.

While dentistry's pedagogy may be appropriate to the requirements of professional practice, it has produced in many of the schools an educational process which is at odds with much of current educational thinking. Competition rather than cooperation is stressed and encouraged; schools tend to be organized and run in a "top-down" fashion, often with little or no opportunity for participation by students either as decision-makers or interested-party advisors. As a result, both men and women students we interviewed said they found their school environments and training experiences stressful and onerous. Women reported unpleasant experiences more often than the men, however, and more often than in any of the other MODVOPPP professions; and faculty also seemed more resistant to the increases of women in the profession than was generally the case in the other MODVOPPP professions.

There are, however, some factors at work in the profession which may offset some of the stresses women students encounter. The American Dental Association staff we met and interviewed expressed a commitment to encouraging women to enter the profession, and they have produced both recruitment brochures and a film on a woman dental student to be used in recruitment. Because of the central and influential position occupied by the ADA in the dental professional network, these efforts are particularly important.

The trend toward increased dental practice in group or institutional settings may modify the present strongly entrepreneurial image and operation of the profession. This trend may work to reduce the male sex-typing of dentistry, and, more immediately, provide women with practice options which are less dependent on informal professional networks which in all professions tend to exclude women.

II. BRIEF HISTORY OF THE PROFESSION

THE PROCESS OF PROFESSIONALIZATION

In the United States, dentistry acquired the status of a profession less than 150 years ago. The first dental journal, the American Journal of Dental Science, was begun in 1839, and the first school was established in 1840 (the Baltimore College of Dental Surgery). It has been claimed that the Baltimore College was founded as a separate institution because "the medical faculty held dentistry to be a mere trade or mechanical occupation, which had no relation to the exalted practice of medicine." (18) Bremner suggests, however, that the real issues was that it was impractical to graft a dental department onto the existing medical school in Baltimore, due to internal problems with the medical school faculty and to a lack of resources. (18)

Until the first dental schools were founded, practitioners were trained in apprenticeships (if they had any training at all) and were often itinerant tooth-pullers. Dental practice acts were first passed in 1868 by Alabama, Kentucky, Ohio, and New York to restrict and regulate the activities of dental practitioners.

After the founding of the Baltimore College, it was discovered that schools could be operated at a profit and a proliferation of proprietary schools sprang up. As many as 150 schools (which lasted for varying periods of time) were established prior to 1920. (19)

There were several major landmarks in the development of dentistry as a profession--events which accelerated the process begun by the establishment of schools, publication of journals, and development of internal independence as supported by licensure and regulation. The first of these was the establishment of a dental school at prestigious Harvard University in 1867. The second, and most important, was the Gies Report in 1926. Dr. Gies was a distinguished biochemist who spent his life studying dental education. His study of dental education is the equivalent of the Flexner study of medical education. Both studies were funded by the Carnegie Foundation and resulted in the closing of proprietary and substandard institutions and

the upgrading of many existing schools. The Gies study was conducted in 1921 but not published until 1926, sixteen years after the Flexner report. Three recommendations made by Gies have perpetuated and emphasized the status of dentistry as a profession separate from but equal to medicine in training rigor.

> 1. Dentistry, the quality and efficiency of its service to the patient, should be made the full equivalent of an oral specialty of the practice of medicine.
>
> 2. Dentistry can be effectually and economically developed to the full service equivalence of an oral specialty of the practice of medicine through extension and improvement, in universities, of that system of dental education which, though separate from medical education, is closely related to it and should be more intimately associated with medical schools, hospitals, and dispensaries.
>
> 3. This extension and improvement could be accomplished without requiring the prospective general practitioner of dentistry to become a doctor of medicine before beginning his dental training, and could best be brought about by pursuit of the following three main objectives:
>
> (a) the preliminary education and the instruction in the medical sciences should be practically the same in general scope and quality as for medicine;
>
> (b) The technical and clinical training, the applications of the medical sciences, and the correlations of clinical dentistry with clinical medicine should be sufficient to assure both ability to initiate safely a dependable modern general practice of dentistry and capacity to grow in proficiency; and
>
> (c) The most advanced phases of dental practice should be reserved for systematic graduate study. (26)

Many attempts were made to integrate medical and dental training after the historical rebuff of the Baltimore College. These attempts were resisted as strongly by practicing dentists as by medical school faculties, since the form of training proposed (known as stomatology) was based on an existing European model where the medical school-trained dental specialist (stomatologist) would supervise the work of dental school-trained technicians (i.e., dentists). Not surprisingly, such proposals were strongly resisted in the dental profession. However attempts to integrate dental and medical education continued into the 1940s by Harvard and by Columbia (first in 1930,

again in 1945) and were met with active disinterest by the dental profession which resented the second-class status accorded dentistry by the medical profession.

In 1910, a distinguished English physician, William Hunter, delivered a stunning indictment of the dental profession in an address at McGill University (Canada) which was indicative of medicine's view of the dentist's skills at that time:

> No one has probably had more reason than I have had to admire the sheer ingenuity and mechanical skill constantly displayed by the dental surgeon. And no one had had more reason to appreciate the ghastly tragedies of oral sepsis which his misplaced ingenuity so often carries in its train. Gold fillings, gold caps, gold bridges, gold crowns, fixed dentures, built in, on, and around diseased teeth, form a veritable mausoleum of gold over a mass of sepsis to which there is no parallel in the whole realm of medicine or surgery. (19)

This paper was widely read and quoted. As a result, the medical profession came to regard the oral cavity as a source of infection and disease. Indiscriminate extraction became the order of the day. (18) This attitude was not finally dispelled until 1951 when A. Easlick completed a three-year study funded by the ADA Council of Dental Health to review professional literature on oral sepsis and overall health in consultation with ten well-known specialists and concluded that the dentist's efforts are beneficial to the patient.

The relationship of the dental profession to medicine presents a complex and interesting set of issues. On many levels, dentistry has established itself as a full professional equivalent of medicine with practitioners in both professions receiving the same military rank and deferments and both accorded the same status in various significant and recent pieces of federal health legislation. There is little competition between the two professions in terms of scope of practice. The only areas where the two might collide are the oral surgeon's need for hospital privileges which are usually controlled by MDS, the treatment of oral-facial anomalies like cleft palates, and the treatment of facial trauma. On the other hand, 52 of 58 schools are located in the

same setting as medical school, and they often find themselves at a severe disadvantage in competing with the medical schools for space allocation, overall budget including faculty salaries, equipment, and supplies. They are also often at a disadvantage when competing on administrative power issues such as goal and priority setting.

HISTORY OF WOMEN IN THE PROFESSION

Levels of Participation

The first woman to receive the DDS degree in the United States was Lucy Beaman Hobbs. She was refused entrance to both medical and dental schools, but served a preceptorship with Jonathan Taft, dean of the Ohio College of Dental Surgery, and later with Samuel Wardle. In 1865, by special resolution she was elected to membership in the Iowa State Dental Society, becoming the first woman member of that group. In 1866 she was granted the DDS degree by the same Ohio College of Dental Surgery which five years earlier had rejected her application for admission. Another pioneer woman dentist was Emeline Roberts Jones, who, after many years of practice, was officially enrolled as a Lawfully Registered Dentist by the Dental Commissioners of the State of Connecticut in 1893. Since Lucy Hobbs and Emeline Jones the percentage of women dentists in this country has neither been very large nor stable over time. There have been fluctuations (see Table 2), with the smallest percentages of women occurring in the 1930s and 40s.

TABLE 2

WOMEN IN DENTISTRY: PER CENT OF TOTAL DENTISTS

	1910[a]	1920[a]	1930[a]	1940[a]	1950[a]	1960[a]	1970[b]
Dentists	3.1	3.2	1.8	1.5	2.7	2.1	3.4

SOURCES: [a] *Epstein, Cynthia F.; Woman's Place: Options and Limits in Professional Careers, University of California Press, Berkeley, 1970.*

[b] *Health, Education and Welfare, Health Resources Administration, Women in Health Careers, Washington, D.C., 1970.*

The percentage of women in dentistry rose in 1950, but dipped down again in 1960 and is only recently--and suddenly--going up again. The suddenness of this increase is reflected in Table 3, which shows nearly half (46.4%) of all women enrolled in dental school in the first year class. Table 4 compares the 1974-75 classes with 1973-74 classes, and shows an overall increase of 63% in the enrollment of women. The ADA expects the trend of increased enrollment of women to continue.

TABLE 3

COMPARISON OF WOMEN WITH TOTAL ENROLLMENT: 1974-75 (number and percent)

1974-75	First Year	Second Year	Third Year	Fourth Year	Total
Enrollment	5,617	5,392	4,763	4,374	20,146
Women	631	388	202	140	1,361
% of Enrollment	11.2	7.2	4.2	3.2	6.8
% of Total Women Enrolled	46.4	28.5	14.8	10.3	100.0

SOURCE: American Dental Association, Annual Report, 1974-75, Chicago, Illinois, 1975.

TABLE 4

WOMEN ENROLLMENT BY CLASS: 1973-74 AND 1974-75 (number and percent)

Year	First Year	Second Year	Third Year	Fourth Year	Total
1973-74	391	225	142	78	835
1974-75	631	388	202	140	1,361
% Increase over prior year	61.4%	72.4%	42.3%	79.5%	63.0%

SOURCE: American Dental Association, Annual Report, 1974-75, Chicago, Illinois, 1975.

TABLE 5

FIRST YEAR FEMALE ENROLLMENTS IN MODVOPPP HEALTH PROFESSIONS SCHOOLS AS AVAILABLE FOR ACADEMIC YEARS 1968-69 THROUGH 1974-75

(BY PERCENT)

PERCENT WOMEN FIRST YEAR ENROLLMENT	MEDICINE	OSTEOPATHIC MEDICINE	DENTISTRY	VETERINARY MEDICINE	OPTOMETRY[a]	PODIATRY[b]	PHARMACY	PUBLIC HEALTH
1968-69	9.0%	4.0	0.9	9.0	-	-	20.1	N/A
1969-70	9.1%	2.4	1.3	10.9	2.5	-	22.7	N/A
1970-71	11.1%	2.7	2.1	10.1	3.7	2.5	23.7	N/A
1971-72	13.7%	4.3	3.1	15.3	5.3	2.0	25.8	N/A
1972-73	16.8%	6.9[c]	4.2	18.0	7.9	2.3	27.7	N/A
1973-74	19.7%	9.0	7.2	22.8[d]	11.3	4.0	29.0[e]	N/A
1974-75	22.2%[f]	10.9[f]	11.2[f]	24.4[d]	-	4.8	-	47.0[g]

SOURCE: *Minorities and Women in the Health Fields, Bureau of Health Resources Development, Health Resources Administration, Public Health Service and Department of Health, Education and Welfare, 1974 except:*

[a] *Unpublished statistical tables from the American Optometric Association, St. Louis, Missouri.*

[b] *Unpublished data from the American Association of Colleges of Podiatric Medicine, Washington, D.C.*

[c] *Journal of the American Osteopathic Association, Education Annual, 1974.*

[d] *Unpublished data from the American Veterinary Medical Association Association, Chicago, Illinois.*

[e] *American Journal of Pharmaceutical Education, "Report on Enrollment in Schools and Colleges of Pharmacy, First Semester, Term or Quarter, 1973-74", 1974.*

[f] *Women in Health Careers: Status of Women in Health Careers in the United States and Other Selected Countries, Chart Book for International Conference on Women in Health, The American Public Health Association, 1975.*

[g] *Association of Schools of Public Health; estimate since some unknown; excludes Puerto Rico*

With the increased enrollments of women in the last few years, dentistry is beginning to close the gap between the profession and other MODVOPPP professions in the first year enrollments of women. Dental schools had the lowest percentage of first year women enrolled in 1970-71, while it is in the middle range (11.2%) of first year enrollment in 1974-75 (see Table 5 on the preceding page).

The increased enrollments of women reflect the rise in applications by women to dental schools over the last several years. Percentage increases were very high--88% between 1970 and 1971 and 68% between 1971 and 1972--though percentage increases must be interpreted with caution when the absolute numeric base is so small.

TABLE 6

APPLICATIONS TO DENTAL SCHOOLS, BY SEX (number and percent)

	Total	Male	Female	Percent
1969-70	56,939	56,446	493	.9
1970-71	56,586	55,840	746	1.3
1971-72	61,488	60,087	1,401	2.3
1972-73	81,784	79,437	2,347	2.9

SOURCE: Health, Education and Welfare, Health Resources Administration, Women in Health Careers, Washington, D.C., 1970.

In addition, attrition rates for women have dropped, with 14% of the third year students in 1972-73 no longer in school by 1973-74, but only 3% of the second year students dropping out in the same year. (Table 7, read diagonally.) Overall attrition for the 1973-74 freshman class was 3.54%. (8) (Attrition is discussed by our respondents in Chapter IV below.)

TABLE 7

WOMEN ENROLLMENT BY CLASS: 1972-73 and 1973-74

	First Year	Second Year	Third Year	Fourth Year
1972-73	224	146	91	50
1973-74	391	225	142	78

SOURCE: Unpublished Data from American Dental Association, 1975.

Type and Extent of Participation

The dental profession first began to consider women as a potential group of interesting professional candidates during the 1960s when it experienced a lack of qualified applicants. In recent years school recruitment efforts aimed at women have become fewer, and the recruitment focus has shifted toward "those supposedly inherent feminine traits that could be beneficial to the profession." (21) These assumed traits, such as the notion that women are good with children, need flexible or limited working hours, are non-entrepreneurial, have been used in the literature to support recommendations that women are best suited for those areas of the profession most affected by the increased demand for dental services--children's dentistry (pedodontics), public health dentistry, and pre-paid services. (9, 14, 33) In addition, several recent studies have examined the type of individual attracted to dental school, and these have expressed concern that male dental students seem "too hungry for profit and less eager to heal." (31) Some observers feel that an increase in women in dental school will result in a more altruistic, socially-conscious student body. (21) Coomb's 1975 national study, however, reveals that the women attracted to dentistry do not differ markedly in motivation from their male counterparts, although they less often emphasize professional income as a major appealing feature about the profession. (See Table 8 on the following page.) It is interesting to note that both men and women rank independence most highly as a motivation for selecting a dental career.

Specialization of practitioners is not encourage in the dental profession as it is in medicine. However, the number of dental specialists has increased in recent years. Table 9 on p. 15 shows that women enter specialties in the same proportion as male dentists (8.3% of women, 8.5% of men). Their participation is different within types of specialties, however, with only .2% women in oral surgery compared to 2.1% of the men. There is also a significantly higher percentage of women entering pedodontics (children's dentistry). Women are more often inactive (retired) than men, which is probably a function of the relatively higher proportions of women in the profession in the 1920s who are now of retirement age. (See Table 2, p. 9.)

TABLE 8

MOST FREQUENTLY SELECTED COMBINATIONS OF MOTIVATIONS FOR ENTERING DENTISTRY, BY SEX N=937

Combinations[a]	Male/Percent	Combinations[a]	Female/Percent
I-S	13.4	I-F-S	8.6
I-F-S	13.4	I-O	7.7
I-S-O	9.7	I-F	7.7
I-S-P	9.5	I-S	6.8
I-O	5.7	I-P	6.0
S-P	5.0	I	5.0
All Other Combinations	43.3	I-F-P	5.0
Total Percent	100.0	O-P	4.8
		I-S-O	4.6
		F-O	3.9
		All Other Combinations	34.9
		Total Percent	100.0

[a] *S=Secure and substantial income*
I=Independence
O=Work with People on a one to one basis
P=Service to the public
F=Flexibility

SOURCES: *Coombs, Jeanne A.: A Nationwide Study of Women in U.S. Dental Schools, PhD Dissertation, Harvard School of Public Health, Cambridge, Massachusetts, 1975.*

TABLE 9

PERCENTAGE DISTRIBUTION OF DENTISTS ACCORDING TO CHARACTER OF PRACTICE, BY SEX. 1973

Character of Practice	Men	Women	All dentists
General practitioner	86.6	80.8	86.6
Specialist	8.5	8.3	8.5
Oral surgeon	2.1	0.2	2.1
Endodontist	0.4	0.2	0.4
Orthodontist	3.7	3.4	3.7
Pedodontist	0.9	2.8	0.9
Periodontist	0.8	1.5	0.8
Prosthodontist	0.5	0.0	0.5
Oral pathologist	*	0.1	*
Public health dentist	0.1	0.1	0.1
Full time on faculty of dental school	1.7	2.7	1.7
Full time in state public dental health program	0.3	0.6	0.3
Full time in dental association administration	*	0.0	*
Retired	2.9	7.6	2.9
Engaged in other profession or occupation	*	0.0	*
All dentist	100.0	100.0	100.0

*Less than 0.1%

SOURCE: *American Dental Association, Report of Councils and Bureaus, Chicago, Illinois, 1973*

Determining the level of effort of dental practice by sex is difficult as data is unavailable for the whole United States. However, a 1973 study conducted for dentists in Michigan showed that while 61% of the men worked 35 to 40 hour (or normal) weeks and only 45.5% of the women did, the majority of the rest of the women were working shorter hour weeks rather than longer ones: 22% of the men worked longer than 40 hour weeks, while only 9% of the women did (Table 10).

TABLE 10

NUMBER AND PERCENT BY HOURS WORKED PER WEEK

Sex	Total	Hours Worked Per Week 1-20	21-34	35-40	41-49	50 and over
Male: Number	3422	137	440	2082	513	250
Percent	100.0	4.0	12.9	60.8	15.0	7.3
Female: Number	33	8	7	15	2	1
Percent	100.0	24.2	21.2	45.5	6.1	3.0

Survey respondents who reported activity status and hours worked per week.

SOURCE: Woodside, Nina: "Women in Medicine: Action Planning for the 1970's," paper presented at APhA Annual Meeting, October, 1974.

Talbot's 1958 study of women dentists and the amount of time they devote to their work provides interesting data on women's practice patterns, although the generalizability of her study to the present population must be questioned as her data is almost 20 years old. As Table 11 shows, single women more often worked full-time than married women--89% as opposed to 53%.

TABLE 11

PERCENTAGE DISTRIBUTION OF SURVEY RESPONDENTS*
BY TIME DEVOTED TO PRACTICE AND BY MARITAL STATUS

Marital Status	Percent of Time Devoted to Practice			
	Full Time	Part Time	Inactive	Total
Single	89	9	2	100
Married	53	30	17	100
Divorced, separated or widowed	75	23	2	100
Total	65	24	11	100

Retired omitted.

SOURCE: Talbot, Nell Snow; "Women in Dentistry," in Hollinshead, Byron S., Director, Commission on the Survey of Dentistry in the United States.

The presence of children also affected women's full-time vs. part-time practice status in 1958. Seventy-nine percent of women dentists with no children worked full-time while only 37% of the women with three or more children worked full-time (Table 12). These data show a clear correlation between level of family responsibilities as indicated by presence and number of children and women's level of practice effort.

Age also affected time devoted to practice according to the 1958 survey. Women in their 30s less frequently worked full-time than did women in all other age categories until after 55 years of age (Table 13). We may reasonably assume that this reflects the presence of young children at home since Table 12 very clearly shows that women with young children (youngest child under six years) practice much less than any group--only 34% in full-time practice.

TABLE 12

TIME DEVOTED TO PRACTICE BY MARRIED SURVEY RESPONDENTS*
LIVING WITH HUSBANDS, BY NUMBER AND AGE OF CHILDREN

1958

Type of Family	TIME DEVOTED TO PRACTICE							
	Full Time		Part Time		Inactive		Total	
	N	%	N	%	N	%	N	%
No Children	53	79	11	16	3	5	67	100
Youngest child 6-17 years of age	32	64	12	24	6	12	30	100
One child	27	49	20	36	8	15	55	100
Two children	28	43	24	36	14	21	66	100
Three or more children	18	37	16	33	15	30	49	100
All children over 18 years	14	35	18	45	8	20	40	100
Youngest child less than 6 years of age	27	34	30	37	23	29	80	100

*Retired ommited. Total does not correspond to number of respondents included in calculations because of overlapping in some classifications.

SOURCES: Talbot, Nell Snow; "Women in Dentistry," in Hollinshead, Byron S., Director, Commission on the Survey of Dentistry in the United States.

TABLE 13

DISTRIBUTION OF SURVEY RESPONDENTS BY AGE AND TIME DEVOTED TO PRACTICE
1958

Age	Full Time		Part Time		Inactive		Retired		Total	
	N	%	N	%	N	%	N	%	N	%
25-29	17	65	6	23	3	12	--	--	26	100
30-34	18	52	12	34	5	14	--	--	35	100
35-39	41	61	14	21	12	18	--	--	67	100
40-44	36	69	12	23	4	8	--	--	52	100
45-49	28	76	5	13	4	11	--	--	37	100
50-54	32	76	6	14	4	10	--	--	42	100
55-59	22	57	13	33	4	10	--	--	39	100
60-61	30	63	12	25	6	12	--	--	48	100
65-69	12	46	7	27	--	--	7	27	26	100
70-74	7	54	1	8	--	--	5	38	13	100
75-79	1	6	4	23	--	--	12	71	17	100
80-84	--	--	--	--	--	--	5	100	5	100
85-89	--	--	--	--	--	--	2	100	2	100
Age not designated	5	71	--	--	--	--	2	29	7	100
Total	249	60	92	22	42	10	33	8	416	100

SOURCE: Talbot, Nell Snow; "Women in Dentistry," in Hollinshead, Byron S., Director, Commission on the Survey of Dentistry in the United States.

The fluctuations in women's entry into the profession are shown by the distribution of current practitioners by age. A comparison of the ages of men and women dentists in 1958 (Table 14) shows that the mode for men was between 30 and 39 years of age; the mode for women was 55 to 64. The mean age of men dentists was 48; that of women dentists was 51.

TABLE 14

PERCENTAGE DISTRIBUTION OF MEN AND WOMEN DENTISTS, BY AGE, 1958

Age	Men (%)	Women (%)
Under 30	10	7
30-34	13	9
35-39	13	14
40-44	10	9
45-49	9	7
50-54	10	8
55-59	10	14
60-64	10	13
65-69	6	8
70-74	4	5
75 or over	5	6
Total	100	100
Average age	48	51

SOURCE: American Dental Association, Bureau of Economic Research and Statistics, "An Inventory of Dentists: Age, Membership, Type of Practice, Dental School and Location", Journal of the American Dental Association, Vol. 58, May 1959, p. 96.

The difference between the average (mean) ages of men and women practitioners has increased over the years (Table 15) as fewer women graduated in the 1960s than earlier. Also, according to our respondents (Chapter IV), it seems that women tend to be somewhat older than men when they enroll in dental school.

TABLE 15

DISTRIBUTION OF DENTISTS BY AGE AND SEX: 1973

(number and percent)

AGE	MEN	WOMEN	ALL DENTISTS
-24	0.1	0.2	0.1
25-29	10.4	6.3	10.3
30-34	12.1	9.2	12.2
35-39	12.0	7.5	11.9
40-44	12.0	7.9	11.9
45-49	11.0	10.6	11.0
50-54	10.5	13.2	10.5
55-59	7.1	8.2	7.1
60-64	6.2	6.3	6.2
65-69	6.3	5.9	6.3
70-74	5.1	9.7	5.3
75-79	4.1	8.7	4.1
80-	3.1	6.3	3.1
Total	100.0	100.0	100.0
Mean	48.3	54.2	48.7
Median	46.0	52.0	46.0

SOURCE: American Dental Association, Report of Councils and Bureaus, Chicago, Illinois 1973.

There is no current data on dentists' income by sex, but Talbot's 1958 study clearly shows that women dentists' average incomes were lower than men's.

> The average net income before taxes of the 185 full-time native-educated women dentists who reported their incomes was $11,011. Since the distribution is skewed, the median, $9,500 is a more significant figure, but 45% made more than $10,000 a year. The most recent study of dentists' incomes made by the American Dental Association showed that the average net income from all types of practice in 1958 was $13,956; the median was $12,982. Since the sample providing the information on which the calculations were based included 3,244 dentists, of whom only twenty-two were women, these figures may be assumed to represent approximately the mean, and median incomes of male dentists. Although they are

considerably higher than the mean and median incomes of women dentists, the comparison is less unfavorable to women than in business and in most other professions. (32) (See Table 16.)

TABLE 16

DISTRIBUTION OF FULL-TIME NATIVE-EDUCATED [a] SURVEY RESPONDENTS BY NET INCOME [b]

(WOMEN DENTISTS)

Net Income	RESPONDENTS	
	NUMBER	PERCENT
$0-$4,999	19	10
$5,000-$9,999	82	45
$10,000-$14,999	48	26
$15,000-$19,999	26	14
$20,000-$24,999	4	2
$25,000-$29,999	2	--
$30,000-$34,999	1	--
$35,000-$39,999	--	3
$40,000-$44,999	1	--
$45,000-$49,999	--	--
$50,000-$54,999	2	--
Total	185	100

Mean net income: $11,041
Median: $9,500

SOURCE: Talbot, Nell Snow, "Women in Dentistry," in Hollinshead, Byron S, Director, Commission on the Survey of Dentistry in the United States.

a *Native-educated includes only respondents who received all dental education in the United States.*

b *Omitted are inactive and retired, in addition to 20 respondents who did not indicate income.*

III. THE PROFESSION TODAY

CHARACTERISTICS OF THE PROFESSION

The Profession and Its Social Image

Dentistry in this country is a strongly sex-typed profession. Nearly everyone knows what a dentist is, but few people have ever heard of or know a woman dentist. Women are much more well-represented in dentistry in other countries, particularly in Northern and Eastern Europe. For example, as Table 17 illustrates, 83% of all Russian dentists were women in 1967. However, for a complex set of reasons, dentistry developed as a male profession in this country and has only recently begun to both receive and accept more women applicants.

TABLE 17

WOMEN IN DENTISTRY, BY COUNTRY; PERCENT OF TOTAL DENTISTS

Country	1954	1967	1972
U.S.S.R.		83.0	
Poland		77.0	
Denmark		70.0	
Israel		45.0	
Sweden	25.0[a]	24.4	
Finland	77.0[a]		
United Kingdom		6.9	8.2[a]
India		3.9	
Japan		3.0	
United States		2.1	
France		27.0[a]	

SOURCES: *Coombs, Jeanne A.: A Nationwide Study of Women in the United States Dental Schools, PhD Dissertation, Harvard School of Public Health, Cambridge, Massachusetts, 1975.*

[a] *Mier, E; Camon, A. and Sardi, Z: "Prediction of Persistence at Work of Women Dentists;" Personnel and Guidance Journal, Volume 46, 1967, pages 247-251.*

Some of the reasons our respondents gave for the overwhelming proportion of men in dentistry in this country are interesting. Some suggested, for example, that one of the significant differences between dentistry as practiced here and elsewhere is the high income a dentist enjoys which is made possible by our laissez-faire health system. These respondents reasoned that since men have traditionally had primary responsibility for family support and since women's incomes have normally been considered supplementary, the profession has resisted the entry of women and, at the same time women have not been as attracted to it for economic reasons as men have. Coombs' study (21) provides some indirect support for this reasoning. Over half (51%) of the male students contacted in the Coombs' study reported income as a significant factor in their selection of a dental career in their most frequent combinations (Table 8, p. 14), while only 20% of the women dental students included income as a consideration in their most frequent combinations. While this emphasis on income by male students is a source of concern to some members of the profession, it is clearly one major attraction for men. The comments of an administrator are illustrative:

> *They* [the faculty] *graduate people from here who I think will not be good dentists--people who are socially insensitive. I know when they leave here they leave with one thing in mind--to make as much bucks as possible. (Administrator, male)*

A second reason offered by some of our respondents for the shortage of women in dentistry involves some of the requirements and the setting of dental practice. Traditionally the dentist has functioned as an independent practitioner, typically in a one professional-person office assisted by and supervising a number of auxilliaries. Some of our respondents suggested that dentistry has not been attractive to women in the past because women have not been socialized or expected to be businesspersons or managers. Others stressed the incompatibility between the demands on time and energy which a family makes on a woman and which the development and management of a solo practice makes on a health professional. The dentist's physical and social isolation from colleagues and others was also frequently mentioned as a potential barrier to women in dentistry. A male faculty member's views of why dentistry would not be attractive to women are representative.

Dentistry as I've pictured it to you is being a person who is separated from the world--away from the world, locked behind closed doors--somehow, not involved with the world. Let's take a woman who is unsatisfied with being a hausfrau. She wants to get out into the world. Why would she turn to dentistry? If dentistry essentially is moving from the house to another secluded place it doesn't give her the capabilities, in my hypothesis, of getting involved with the world. She would go from her home to her secluded office. She goes from seclusion to seclusion. There is little capability of mingling with one's fellow beings, be they female or male, as the situation is. You work with people, but as I always keep saying, dentists don't work with people, they work on people. In a sense, dentistry may not have been attractive to those few women who wanted to get out of the house. (Clinical faculty, male)

Third, our respondents have suggested that there are several popular images of the profession which have served to discourage women applicants, as the following illustrates.

The Technical/Mechanical Aspects of the Work

While dental hygienists and assistants (usually female) learn to use most of the equipment employed by dentists, the use of elaborate instruments is not part of our social image for the feminine woman. Women generally do not score as well on the manual dexterity tests used for dental school application since their early childhood experiences and later training do not normally include the kinds of skills which might assist them such as mechanical drawing and auto or machine shop.

Dentists Hurt People

According to many of our respondents, the average dental patient arrives for his/her annual checkup feeling fine and leaves feeling terrible. While modern anaesthetics, high-speed drills, etc., have done much to soften the dentist's image as one who causes pain, most people still associate dentists with "drills, clamps, picks, and toothaches". In our interviews with women students in the MODVOPPP professions, many expressed a desire to help people, but many also said it was difficult for them to get beyond the dentist's image as causing pain to the helping which results.

Perhaps the whole thing of dentistry linked to pain is that women would not want to be in that profession. This is an image issue, in terms of women's view of the profession. (Administrator, male)

The image of the dentist is going to have to change drastically because most people still, you know, even with anaesthetics, most people still think that they are going to get really hurt when it comes to dentistry. (Group interview, mixed years, male)

Removing Teeth Requires Physical Strength

While not entirely true (leverage helps), people think extractions are physically too difficult for women. A general practitioners would normally refer the problem extractions to an oral surgeon since removing teeth is no longer the primary function of the dentist, but the idea that extractions are physically too difficult for women is often used to discourage women from entering the profession.

The whole thing is you don't pull teeth now, you elevate them, and it only takes seven to eight pounds of pressure to get a tooth out of an average mouth. You know, that's always the comeback to people who think you can't do it. (Group interview, mixed years, female)

Other aspects of the profession which should be discussed here which appear to encourage women to consider it include the following.

Independence

Women students we interviewed rate the independent nature of dental practice as highly influential in their decision to apply, and Coombs' study validates that observation (see Table 8, p. 14).

Geographic Mobility

A dentist can practice anywhere s/he is licensed provided the patient population exists. However, the primary drawback to dental practice has traditionally been that the establishment of a private practice required considerable investments of time and money, and the established practitioner was not geographically mobile. Recent trends to include dental care in pre-paid

plans, HMOs, and other settings where the dentist is an employee or partner provide more freedom for those women who need to move with their husbands or work part-time.

The Profession and Practice Options

Dental group practices have developed quite recently and are still rather rare. More than 91% of active dentists are in some form of independent practice. Most dentists (nearly 65%) practice alone (with or without auxilliaries). An additional 9% practice alone but share some operating costs with other professionals such as shared clerical or receptionist time, X-ray equipment, etc. A total of seven out of ten dentists are presently in independent practice. Numerous studies have shown that students are overwhelmingly motivated toward dentistry out of a desire for independence, for example, Coombs, 1975 (21). Therefore, we can probably anticipate that the current interest in group practice forms of dentistry will take hold slowly.

Changes in payment and funding mechanisms encourage the predicted changes in practice patterns. Dentistry has long been a profession serving primarily the upper and middle income groups which could afford to pay for expensive services. Increasingly, the federal government has become a third-party payment service for individuals from lower socio-economic groups which have not had access to dental services in the past. Additionally, private third-party (private health insurance and group plans) mechanisms are adding various types of dental care to basic health coverage. This increased demand for services has been one of the pressures for federal support to dental schools to turn out more practitioners more quickly by encouraging increased enrollments and three-year programs.

CURRENT TRENDS AND ISSUES

Some of the current trends and issues facing the profession have been pointed out in preceding sections but will be summarized here.

Changes in the Image

Improved dental technology is responsible for some changes in the popular image of the dentists as someone who causes pain. Also, the emphasis in dental care has shifted from removing or replacing teeth to preventive care. The American Dental Association (ADA) nationally and through its state and local branches has conducted campaigns through the media to educate the public on the need for regular checkups, brushing, and flossing. This effort, combined with dental education for the public in schools and in the dentist's office, have helped to convince the American public that the dentist is concerned with preventing tooth loss and decay, and that a visit to the dentist does not necessarily mean a painful experience.

The Nature of the Work

One third year woman student described dentistry to us as "...a nitty, picky profession", meaning that the work is conducted in small, confined spaces with limited access. The nature of the work has not changed much in recent years, but the dentist's role has changed. It is important to note that our respondents characterize dentistry as "doing surgery all day long", and that makes great physical and mental demands of the practitioner.

Practice Patterns and Economic Organization

Group practices are becoming an economic necessity for young graduates, and are considered by many to be the wave of the future for dentistry. Although banks will loan money to new graduates to begin practices, current high interest rates combined with the already large debts incurred by the student for graduate and undergraduate training discouraged many of our respondents from considering starting practices of their own upon graduation. Group practices or shared resources--for example, one receptionist, or one X-ray machine shared by two or more independent practitioners with separate operatories and auxiliaries--not only decrease the costs, but also lessen the isolation of the practitioner from other dentists.

Dentists are also beginning to work in new settings such as hospitals, in community clinics or HMOs, and in schools. This change in practice setting has been facilitated by third-party payment plans and doubtless will continue.

Much of the work presently done in clinics or schools is simply screening, with patients referred elsewhere for treatment.

Auxiliaries

> *Anything meaningful happening in the profession will happen in terms of auxiliary utilization. (Clinical faculty, female)*

The most significant set of relationships not yet discussed is the interdependence of the dental profession and its three primary auxiliary professions: Dental Hygiene, Dental Assisting, and Dental Laboratory Technology. The training for a large proportion of the auxiliaries is conducted in association with dental schools, although some proprietary schools have programs in dental assisting and technology, and many community colleges train hygienists and assistants. Control over accreditation of dental school and community college programs and licensure of all graduates remains with the dental profession, however, through the state dental licensure boards.

The first dental hygiene course was established in 1913, and women dental assistants (as opposed to male apprentices) date from 1885. (30) However the use of auxiliaries in dental practice has been increasingly emphasized since 1950 in an attempt to maximize the productivity of the limited number of practicing dentists. A 1958 study, based on the number of patient visits, found that dentists with no auxiliaries were 30% less productive than the average dentist, and a dentist with four or more full-time auxiliaries was 85% more productive. (29)

The increase in the use of auxiliaries is illustrated in Table 18 on the following page. In the six years between 1958 and 1964, the proportion of dentists using no auxiliaries dropped by nearly half, and the use of all categories of auxiliaries (including receptionists) increased steadily. Dental education curricula now teach students the use of auxiliaries. "The team approach changes the dentist's role from that of a solo entrepreneur to that of manager, and it requires of him a whole new set of skills." (9)

TABLE 18

PERCENTAGE OF DENTISTS EMPLOYING AUXILIARIES: 1958, 1961, 1964

	1958	1961	1964
Dentists with no employees	18.2	17.4	10.1
Dentists with dental hygienists	14.0	15.0	20.2
Part-time hygienist only	7.5	9.2	10.9
More than part-time hygienist	6.5	5.8	9.3
Dentists with dental assistant	75.5	76.7	82.4
Part-time assistant only	9.8	8.3	7.3
One full-time assistant	58.4	58.7	62.9
Two full-time assistants or more	7.3	9.7	12.2
Dentists with dental technicians	5.4	5.1	6.3
Part-time technicians only	1.9	2.0	2.1
More than part-time technician	3.5	3.1	4.2
Dentists with receptionists	16.1	19.3	28.6
Part-time receptionists only	5.2	5.8	5.9
More than part-time receptionists	10.9	13.5	22.7

SOURCE: Moen, B.D. and Poetsch, W.E., "Survey of Dental Services Rendered, 1969", Journal of the American Dental Association, Vol. 28, July 1970, pp. 25-36.

Auxiliaries relieve the dentist of time-consuming tasks such as scaling teeth and patient education, and they assist by minimizing time and effort in "four-handed" dentistry in which the assistant functions to the dentist like an operating room nurse does to the surgeon.

Changes in Technology

Major technological changes in the profession include greater use of, and a wider variety of, anaesthetics; new high speed and sonar drills which do the cavity preparations more quickly and with less discomfort to the patient; the use of the rubber dam to isolate the tooth (or teeth) requiring work; and improved restoration materials. Another important change is the invention of the dental operatory which allows the patient to assume a reclining position, and the dentist to sit. Aside from being more comfortable for the patient

who no longer must crane his/her neck back, the dentist no longer has to spend his/her day bending over, and it facilitates auxiliary assistance to the dentist. Termed "four-handed, sit-down dentistry" by the profession, the use of this new operative approach is being taught in all dental schools.

The Informal Network

One issue not yet discussed is the strength and pervasiveness of the informal networks linking practitioners and serving as medium of information exchange and mutual support. Probably the first contact a student has with this network is through the dental fraternities. While there is a dental sorority, it is not active at all schools, and does not represent the membership or influence that the fraternities attain. Fraternity membership can be especially influential in starting a practice since brothers already established in a community will assist the new practitioner. Fraternities provide peer companionship for the individual practitioner. Women are admitted to some chapters of some fraternities, but women told us they often feel more tolerated than welcome. Fraternity memberships provide student the advantages of files of old exams, slides of cell preparations, and other study aids. Since few women have access to fraternity memberships, they not only miss social/intellectual companionship during their school years, but also the very real support of graduate members once in practice.

Another example of the informal network is the role of the dental supply man (or detail man) who is roughly the equivalent of the drug company salesman to doctors. The detail man is an important link among the individual practitioners in his territory. He is able to advise the young graduate on the identity of the other dentists in a given community, who has influence, power, and so on; and he shares information on new techniques, drugs, or equipment. Women students frequently complain that the detail men at conventions will have nothing to do with them, either assuming that they are hygiene students (despite name tags) or ignoring them altogether. It is reasonable to assume that women practitioners may encounter similar difficulties with detail men and miss this important source of advice and assistance.

Additionally, practitioners have traditionally formed small, local "study clubs" which function as an information exchange and a source of continuing education. Some of the responsibility for continuing education has shifted to the schools, but the study clubs still provide a forum for the kind of professional conversations that are invaluable to the isolated practitioner. Other MODVOPPP professionals have the opportunity for these exchanges in the hospital or other place of work, but the independent dental practitioner must create professional relationships outside the office. We do not know a great deal about how these clubs form, how new members are found, or whether women practitioners are easily incorporated into the clubs.

Other Changes Including Federal Legislation

There is little agreement among experts as to what constitutes an adequate ratio of dentists to population, particularly in regard to current demand. However it is clear that a significant proportion of the population presently receives inadequate dental care.

> The evidence of unmet need for dental care is equally disturbing. In the period 1960 to 1962 it was found that about 20% of persons aged 45 to 54 in the United States had lost all their teeth and that this proportion rose sharply with advancing age. The National Health Survey of 1963-64 indicated that nearly three-fifths of the population had not seen a dentist in the preceding year and that one-sixth of the population had never seen a dentist. (20)

Projected shortages (Table 19 on the following page) of dental personnel may serve to hasten the development of newer, more efficient forms of service systems including group practice and screening clinics.

The increased presence of the federal government in the American health care delivery system has some disadvantages for the dental profession. In addition to contributing to some loss of independence, the government has a tendency to give medicine first place in many programs defined by federal legislation.

Perhaps one of the most striking examples of the failure to recognize the unique nature of dental activities was in the initial congressional proposal to set up systems for monitoring the quality of care being provided under federally financed health service programs. The first legislation introduced called for the establishment of Professional Service Review Organizations in each state to be undertaken entirely by medical societies. (PSROs are usually on a local level, so most states will contain several.) Not surprisingly, the dental profession felt that it was not only inappropriate for the profession of medicine to monitor the profession of dentistry, but questioned whether physicians had enough knowledge of dental science to judge the quality of care. (19:31)

TABLE 19

PROJECTED MANPOWER SHORTAGES OF: 1970-1990

Year	Dentists	Hygienists	Assistants	Dental Technicians
1970	29,847	16,790	53,532	35,091
1975	39,942	19,573	103,200	14,775
1980	35,894	24,189	181,998	18,521
1985	33,851	22,795	192,682	16,178
1990	34,314	20,405	200,528	11,804

SOURCE: American Dental Association, Task Force Committee on Manpower and Resources, Chicago, Illinois, August 1971.

The profession itself has recognized the need for change. The National Institutes of Dental Health Research and Education Advisory Committee sponsored a series of papers and commentary by distinguished authors (not all dentists) in 1971. The papers and commentaries were published in 1974 and outline the issues facing the profession, alternative solutions, and their various advantages and disadvantages. It is clear that the nature of the profession must alter to meet future demands.

IV. PROFESSIONAL EDUCATION

CURRENT TRENDS AND ISSUES

Historically, dental education has been rather inflexible. This remains true in many of the established schools, particularly in private schools with limited financial resources. Presently, however, with the encouragement of the American Association of Dental Schools (AADS), schools are considering adopting a variety of new curriculum approaches.

While the majority of dental schools require the equivalent of four academic years of training, 14 schools are currently on a four academic year/three calendar year program. This development was encouraged by the federal government, and is accomplished by eliminating summer holidays and semester/quarter breaks. While this scheme does not necessarily reduce the cost of training a professional, the student spends less actual time in training and the schools make maximum use of existing resources. However, faculty frequently complain that the 4/3 system allows them no time for continuing education or research and that the students simply do not get enough practice in manual skills. In addition to the 4/3 program, 28 schools will permit an advanced student to move through the set curriculum in less time (ten of these are 4/3 schools).

Other new and/or experimental approaches to the education include combined basic science programs serving medical and dental schools (and other health profession programs and biological sciences as well); earlier introduction to clinical work beginning as early as the third quarter of the first year; and off-campus dental clinics, often for indigent or prison populations, to expose the student to a variety of clinical settings.

On-going curriculum review is required for accreditation by the ADA's Council on Dental Education. The current upheaval in curriculum approach makes it nearly impossible to describe a "typical" dental school. The traditional four-year institutions require at least two years of academic work (basic science) prior to two years of clinical training. In 1960, the Commission on the Survey of Dentistry (4) complained that frequently little or no connection was made by the faculty between the basic sciences and the clinical training,

and that too much emphasis was placed on student work in the clinic (which generates revenue for the school) over laboratory and research work in the second two years. Many dental schools are now experimenting with curriculum modifications directed toward these problems, including changes which particularly focus on the earlier integration of clinical work with the basic sciences. While clinic revenues do not represent a large portion of total school operating revenues, their importance should not be underestimated as one consideration influencing the amount of time students must devote to clinic work. In fiscal year 1973, for example, clinics generated nearly $22 million--approximately $10 million to the 34 public schools, and $12 million to the 24 private and private-state-related schools. (7)

Dentistry shares with some of the other MODVOPPP professions several problems in its attempts to attract faculty. Teaching in a dental schools does not provide as many opportunities for research as offered by medical school appointments. In 1973, for example, the total research budget from outside sources (federal, state/local, and non-government) averaged only $490,725 for public institutions, and $259,933 for private schools. (8) Dental school salaries normally cannot compete with the income of private practice. Mean net annual income for general practitioners in 1973 ranged from a low of $26,576 in South Dakota to a high of $41,850 in Georgia. (7) Dental specialists may earn considerably more. As a result, many schools permit faculty to maintain private practices, and an overwhelming number of clinical faculty appointments are part-time to allow for private practice. In 1974-75, there were 2,971 full-time clinical faculty, and 5,584 part-time clinical faculty. Of the 58 dental schools, 51 permit all faculty to engage in private practice, although all but 12 restrict the number of hours per week that the dental faculty may devote to his/her private practice. (8)

According to our respondents, many schools often solve their faculty recruiting problems by hiring retired military practitioners who supplement their pensions with faculty salaries (or vice versa). This is an important feature of dental education since it affects the pedagogical style.

The schools' difficulty in attracting and retaining faculties is demonstrated by the teaching position vacancies in the profession overall. In 1974-75, there were 179 full-time clinical faculty positions vacant, 200 part-time positions, and 61 FTE (Full-time equivalent) spaces empty. Additionally, there were 222 unbudgeted, unfilled positions. Pre-clinical departments showed only 45 full-time vacancies, 17 part-time, 4 FTE, and 69 unbudgeted, unfilled positions. (8)

THE SCHOOLS

Several new dental schools have been established recently, and more are planned to solve the problem of the shortage of qualified dentists. These new schools are more often willing to experiment with new forms of curricula and teaching methods since they are neither confined by tradition nor by alumni pressures to sustain certain teaching traditions. However, as one of our respondents noted:

> *There are no 'new' dental schools--because the senior faculty have all taught somewhere else, and they bring their conservatism with them. You believe, you're supposed to think new and you're cognizant of the fact that you're establishing a new tradition, the 'right road'. (Clinical faculty, male)*

As of 1974-75, there were a total of 58 dental schools in the United States. Of these schools, 51 are fully operational, and seven are new schools in various stages of development. The American Dental Association (ADA) classifies schools as public, private, and private-state-related. Private-state-related schools are those private university programs which receive state support, usually a prescribed dollar amount per state resident enrolled in the program. The majority (34) of schools are public, and another 14 schools are private, with an additional ten private schools receiving state support. (See list of schools, Appendix D.) Forty-one schools grant the DDS degree, while the remaining 17 schools grant the DMD degree. The difference between the two degrees, according to the ADA is largely semantic. (9)

Fifty of the dental schools are located in a setting where medical schools are present. In addition, two of the new schools are developing along with medical schools. Only six schools exist in a setting without a medical school

(University of the Pacific, Southern Illinois University, University of Detroit, Fairleigh Dickinson, Virginia Commonwealth, and Marquette University). Thirty-two dental schools at least share part of the basic science instruction with a medical school. In five schools, basic sciences are taught by an independent division (core curriculum). Fourteen schools provide completely their own basic science instruction. The trend is clearly toward shared resources both in new schools and in established schools shifting to share basic science courses (four have changed over since 1971).

The 58 schools are fairly evenly geographically spread, with the exception of the Western states. In the West, there are only seven schools--four of which are in California, and one of which (Colorado) is not yet fully operational. Also the Southern states, which already have a large number of schools, have two new schools starting (Florida and Mississippi). Geographic location has affected the educational emphasis:

> *I think there is a difference between practitioner skills because of the education--and again, there are differences between different parts of the country. The West Coast has always been much more technique oriented, carpentry oriented, has a reputation of turning out dentists that were very capable mechanics, whereas the East Coast schools have put more emphasis on theory, diagnosis, medical or health aspects to dentistry and, therefore, out of necessity, have put less emphasis on the technical competence. This has changed now. Our school, for instance, has increased the emphasis on the basic medical sciences, basic medical dental sciences, diagnosis, less tangible aspects of dentistry. Of course, some of the people in the clinical end, where they lost time and instruction say, 'Well, we can't come up with as good a product' in their area. And that may be true. (Administrator, male)*

Dental education is expensive. One dean of a private school estimated that it cost the school $50,000 to educate a student for the full four years, of which the student tuition covers about $28,000. Annual tuition ranges from a low of $325 for residents at the University of Texas to a high of $9,416 for non-residents at the University of Colorado. The average per year is $1,928 for state residents and $2,518 for non-state residents. In addition to tuition costs, students must pay fees and purchase instruments totalling an average of $3,900 ($1,906 for the first year, $1,208 for the second year, $470 for the

third year, and $219 for the fourth year). The hypothetical average dental education for four years would cost the student $11,615 as a resident and $13,975 as a non-resident in tuition and instrument costs alone, and costs go up every year. (9)

For some applicants to some schools, inability to pay such costs is a formidable barrier to admission--and apparently in some cases, an insurmountable one. One woman told us of the following experience at a private school to which she applied but at which she was not accepted:

> *I was very reluctant to ask for help from my husband's parents because they had one daughter in college at the time and another one coming along. And my parents just simply don't have the money, and if they did I wouldn't ask them anyway because there would be strings attached. So we couldn't do it on our own. If I could get loans through the school or anything we could have handled it, but the guy that interviewed me said right out that everything looks just great except that you don't have any money and you can't afford to pay for it. And he said because of that you more than likely will not be admitted. And that's just exactly what happened. (Fourth year student, female)*

This student was fortunate enough to be accepted to another (public) school where she could pay her way with loans. Another woman student also felt that finances were influential in the decision to admit her:

> *I don't really know how they gauge who gets in . I think a lot of it is your financial statement. There's probably a lot of girls really highly qualified, but they just don't have the bucks. It just so happened that my dad could afford to pay for it, and I didn't have to get any loans or anything like that, so I'm sure that put me right at the top as far as who they were going to pick. (Second year student, female)*

The 1973 ADA application/first year enrollment figures show than an overall ratio of 9.93 (or slightly over 10% of all applicants) are accepted. This information is misleading, however, becuase it does not take into account the number of multiple applications. Most applicants, either on their own or through the American Association of Dental Schools (AADS) Application Service, apply to numerous schools to better their chances of admission. In 1973-74,

the average number of applications per applicant was 3.65 (7), which reduces the applicant/first year enrollment ratio to 2.71/1 (in other words, approximately one of every three applicants is enrolled). Applicant/first year enrollment figures are not available by sex.

Existing schools are under pressure to increase enrollments annually as a condition of receiving federal capitation funds, and new schools have been a-ding classes each year to produce a steady increase in overall enrollments (see Table 20, p. 50). These increases are reflected in the number of graduates in recent years (see Table 21, p. 51). The abrupt increase of women enrolled in dental schools discussed in Chapter II is so recent that it has not yet had an impact on the proportion of women graduates of dental schools (Tables 20 and 21). While the proportion of women graduates will clearly begin to increase in the near future, dentistry is still far behind the other MODVOPPP professions in proportions of women enrolled. Podiatry is the only profession with smaller percentages of women enrolled or women graduates, and podiatry does not have the advantages of size and visibility to attract women students that dentistry has.

THE PROFESSIONAL TRAINING SEQUENCE

The major steps in the professional training sequence which prepares all dental students to become dental practitioners include: recruitment; application and admission; preclinical training; clinical training; licensure; postgraduate education; and starting practice.

Recruitment

Dental schools do very little recruitment. The schools we visited tended to formally recruit only minority students in some cases (one school has a federal grant for this purpose) or to visit pre-dental clubs at "feeder" colleges in their state or area. The American Fund for Dental Health (AFDH) maintains a significant scholarship fund for needy students. Designed to encourage qualified students contemplating a dental career, the AFDH fund begins student support during the year preceding entry into the training program.

Several students who received AFDH scholarships reported being contacted by schools during their last undergraduate year. The ADA has recruited for the profession for many years with some material directed toward women including a brochure and a movie about a woman dental student. The schools we visited have done no recruiting of women, and often, catalogues or other school materials do not make women visible or welcome.

> *We haven't done anything really overtly in terms of recruitment of females outside of the usual blah-blah statement we put in the catalogue, 'We welcome minorities, and others.' Women are usually the others. It's an odd way of stating it. I would rather just put down we welcome all to apply. We could get to that stage--really look at everybody on their qualifications. (Administrator, male)*

The role of high school counsellors in steering women away from dentistry was frequently mentioned by our respondents. Efforts on the part of the profession are needed to counteract such an important influence. One of the male administrators with whom we spoke cited the case of his own daughter:

> *I really think that is where the root of the problem has been...in counselling. My daughter evidenced an interest in dentistry and her counsellor said, 'That's not a profession for women, and you should go into dental hygiene.' I said, 'Nonsense, if you're interested in dentistry, let me talk to the counsellor.' She said, 'No, I don't want you to talk to the counsellor because she'll get uptight with me.' I think that the high school counselling system is where you people should begin to place some emphasis because that is where a lot of girls get turned off to dentistry and other health professions. Girls are getting counselled into paramedical programs. This will change with pressure from the students, but I think counsellors should be gotten to from the top, too. (Administrator, male)*

Application and Admission

The centralized application service for the profession is conducted by the American Association of Dental Schools (AADS). Using the application service, the student fills out a single standard application form which, together with grade transcripts and DAT scores, is forwarded to the AADSAS office. The student pays a single application fee and may request that the application be submitted to as many participating schools as s/he wishes. The advantages of the AADSAS is that applicants can submit

multiple applications to increase admissions chances, and schools may select classes from a broader range of students. Some schools do not elect to participate, however, since the application service can increase the applicant pool to overwhelming numbers. Those schools looking for a particular type of student must pay more attention to the harder-to-evaluate subjective material in the student's folder, and they therefore prefer a smaller, more selective applicant pool. Once the AADSAS or other initial applications are complete, schools then contact all promising applicants for further information such as letters of recommendation, and interviews may be scheduled.

The ADA Council on Dental Education designs and administers the Dental Admissions Test (DAT). The test consists of four sections covering reading ability, biomedical sciences, verbal and quantitative ability, and a final section called the Perceptual-Motor Ability Test (PMAT) which tests two- and three-dimensional problem solving. Women students generally do not score as well as male students on the PMAT. Schools often weigh the different sections of the DAT differentially, with greater emphasis on the sciences and PMAT sections. Consequently, the lower scores of women on some sections may disproportionately lower their overall "points" for admission (see below). The PMAT section was added to the DAT in 1973 to replace the carving dexterity test, which favored those students whose training included mechanical skills. It was felt that the old carving test discriminated against women applicants since few women were able to take mechanical drawing or shop classes which might prepare them for the exam.

The validity of the entire DAT series as a predictor of success in dental school is question by Sherlock and Morris (30:53), since the test can only measure academic promise and not clinical skills. The PMAT section may be useful in identifying natural ability and manual skills, but has not been in use long enough to be evaluated as a predictor of success.

At least one school has apparently devised its own test for measuring manual dexterity. The test results can be improved with practice, and all applicants are urged to purchase practice kits. The problem here again is that

male students often have the advantage of mechanical drawing or shop classes to increase manual skills, and pre-test practice on kits by women students is not generally sufficient to enable them to catch up to their male counterparts.

Once all the information which the school chooses to use for evaluation has been collected, weights are given to the various components, the applicant is given a numerical score, and applicants are rank-ordered. Classes are selected from the top-scoring candidates. Formulas devised for this rank-ordering will reflect the schools' priorities--for example, giving greater wieght to the science GPA or the PMAT section of the DAT. Some schools do not weigh DAT scores as heavily as GPA and other factors because of the doubts about the DAT's value as a predictor of successful clinical performance.

Of the five dental schools visited, only two routinely required interviews. One of these used a standard form for evaluating interviewees. Two schools do not interview at all, and one school interviews only minority program applicants and other special cases such as high GPAs and low test scores. Interestingly, many of the women we interviewed at this school reported being invited for an interview although they did not have unusual qualifications.

Several of our schools simple admit the top applicants from rank-ordered lists based on quantitative criteria such as GPAs. Other materials in the applicants' folders, such as letters of recommendation, are only taken into account if there is a problem. Other schools go to considerable lengths to try to evaluate "what makes a good dentist" and then use these principles to evaluate applicants:

> *Well, yes, I think all of our students that come in here can do exceedingly well in strictly academic subjects. They certainly have proven that they are capable of learning subject matter and feed it back when asked to do so, whatever that means, and get good grades in academic subjects. But that doesn't mean that they are necessarily going to be good dentists. In doing things with their hands and having this ability to work with small details and doing it accurately or don't perceive first time around this transition from two to three-dimensions--I think this is a very important aspect of it. Some dental*

schools have made special aptitude tests where they are testing that particular aspect with various models and things and even that doesn't give good correlation of how people perform. It's a very difficult thing to do. I don't know how it can be measured. I don't think anybody really knows how it can be measured. Many people have tried. (Administrator, male)

Women students have expressed problems with inappropriate or unfriendly questions in interviews:

I also called a place to speak to the man in charge--and he said, 'Are you married?' 'No.' 'Do you have any intention of getting married soon?' 'No.' 'Well, if we let you come into this program, will you stick with it afterwards? What are you going to do with this training we're going to give you? Are you going to go back to where you came from and have a whole bunch of babies?' Now, is that relevant? (Group interview, mixed years, female)

When you're sitting on a committee and you're judging, you say, you try to judge personalities, but then you run into the problem where you have 11% of the applicants are female, and a school that accepts a high percentage of those who apply. Then, I think that you're trying to force more women into the field, and I brought up the question, and there was much discussion of it...should you ask the question, 'What do you plan to do about a family?' Many people say that it is an unfair question. My reason for asking the question is not a yes or no answer, 'Yes, I do want to have a family', but you see whether the person has thought about it. People are applying at the age of 20-21, later 20s to a profession that they want to take part in for the rest of their lives, and as a person sitting on an admissions committee, I take that as part of my responsibility, that they're going to be in the profession for the rest of their lives.. and have they thought about five years from now, what they plan to do. And even if someone came to me and they said, 'Well, I plan to get married--I plan to have kids. I still want to be a dentist, and what I plan to do then is a possibility of going into hospital work in dentistry, and possibly work certain hours.' Just that they've thought about it, and they've looked into their life. Men you can't ask the same question. You can ask the same question about are you getting married, but it's how do you plan to take care of the kids. You ask that...that question is asked to the female and that's the whole purpose of the question, because in our society, the female is, quote, supposed to take care of the kids. And there are other questions that you can ask the males, such as what do you plan to do five years from now; what do you think of this in dentistry, that in dentistry. (Second year student, member of admissions committee, male)

He [the interviewer] *said 'you'll be a distraction to the other male students who will not be able to study'* [*laughter*]. *I had an interview at school and they spent ten minutes talking about whether I looked like a female singer on Lawrence Welk or Mary Tyler Moore, and now, I really get upset. And if I knew then what I know now, I would have told them where to go and gotten up and walked out, but I sat there and took it and hated myself ever since for it. (Group interview, mixed years, female)*

Preclinical Training

The "traditional" dental curriculum requires two years of pre-clinical work (didactic classes in basic sciences and laboratory classes) prior to patient contact. We visited only one school which still uses this format. Other schools visited included two three-year schools, one four year institution in a twelve month academic year (actually a total of five academic years) and a four year school using a "diagonal" curriculum set up which introduces clinical contact in the first year, and gradually increases to the fourth year of almost one hundred per cent clinical work.

On the whole, women students do not have problems with the basic science classes. Their problems are centered in the laboratory work, and often start the first day with how to sort and put away their instruments.

R^1 *During that first year our instructors got the impression that we're stupid because we never did this before, and now that we know what we're doing and we know how to organize it and we know where the drawers are, they still have this idea we're dumb--and it's not true.*

R^2 *The first impressions last...*

R^3 *But there are also some teachers who don't think that way, who say don't worry it will come. I've seen it happen. 'Four years from now you'll be up with the others.'*

R^1 *Sometimes I get the impression they're saying that just because you're a woman. 'Don't worry it's going a little bit slower for you but it will come.' In a way I appreciate it, but sometimes I resent that they expect you not to get it as fast as the men because you are a woman.*

R^3 *Oh honey just relax, it will be ok. There are some men without mechanical backgrounds. They would just tell them to keep doing it over and over until they got it.*

R[1] Well I can just relate an experience on the first day in operative dentistry when he says you're going to need a fifteen hatchet, a ten hatchet, and you're going to be working on an MO, and they tell you about the preparation you're going to be doing with instruments and physical properties--and I had no idea what a hatchet looks like...

R[2] That kinda goes back to my work again. It seems to me that the guys in the class have had more experience taking apart things and using machinery and knowing how things work that I'm unfamiliar with.

R[3] I've also run into some guys that are worse off than I am so I don't feel so bad. Some are very skilled, they've worked with a lot of power tools, you know, they know a lot about the tools we are working with. (Group interview, mixed years, female)

Unlike the basic sciences, evaluation of laboratory work is subjective. Students spend laboratory time carving facsimilies of teeth and cavity preparations out of hard wax or other materials. Evaluations of the finished work are based on the faculty member's judgement of what the work should look like, and they can be influenced by faculty perceptions of the student. Women students report that some faculty seem to feel a priori that women cannot do fine work, and the women's evaluations may suffer for it. One woman described the following experiences:

I found the first year that I got a lot of the 'Well, that's pretty good for a girl,' routine from the instructors and consistently I would get at least half a grade lower than the guys around me for the same type of work and there wasn't anything I could do. I would always get the B+ and they'd get the A- and there wasn't anything that I was going to do to that instructor to impress upon him the fact that I could do A work.

He was finally giving me excuses, 'Well, if you'd gotten me on another day, it would have been an A.' And phoney excuses such as I asked him, 'Why isn't this an A+?' and he couldn't find anything wrong with it. Finally he's breaking down into the 'Well, this is Thursday. On Tuesday that would have been an A+,'--phoney excuses. So I think it's just that a lot of them, because of their own inner ego, won't let women do very well. They won't admit that women can do as well as men so they knock them down a little bit. (Group interview, mixed years, female)

Clinical Training

As mentioned above, clinical work begins at various times during training. Clinical evaluations, like lab evaluations, are necessarily subjective with the same implications for women students. Some of the schools we visited offered off-campus clinical work at community clinics, etc. One important off-campus clinic offering unique learning opportunities was closed to women students on the grounds that it is conducted at a state men's prison, and equivalent training was not made available elsewhere for the women.

A number of serious issues have come up in our interviews concerning clinical training. Most of these problems affect both men and women students, but it often appears to women students that they are singled out disproportionately. The first problem concerns the subjectivity of grading clinical work, which is similar to the difficulties of accurate and consistent grading of laboratory work during preclinical training. The woman student below describes an incident of arbitrary grading which discouraged her from doing her best work.

> *One time I cut a prep that I thought was just really fine, and I got a D+ on it or a D. That really just blew me off the wall. And there was no comment on why I got that grade. And this was the third D I'd gotten. I decided I wasn't going to stand still for this garbage, and that something was going on, but I'm not going to stand still for this grade.*
>
> *I said to the instructor, 'I don't think this is a D prep. If this is a D prep, then I don't understand anything you've told me, I have clubs for hands, and I might as well not even be here.' He looks at it and he says, 'Well, yes, this is a very good prep.'*
>
> *I'm at the end of the alphabet; he told me that if I was at the opposite end of the room, if I was in the A section that would have been an A prep. So he looks at me and says, 'Well, the highest grade I can give you on that prep is a B. I will change the grade to a B.' Now, how can I go from a D to a B and I should have had an A on the same prep--I just knew that something was going on.*
>
> *He came back to me another time after that. I didn't say, 'You're cheating me, or singling me out'--I never said any of that; I just talked about that prep. I said, 'That's a good prep,' and he comes back in the lab, and he knew I was very upset after another practical, and he starts saying, 'Well, you know I hand-pick all my professors and I think they are all very fair and we are not singling you out, and every grade you get is just, and I'm not coming down on the girls.*

That's when I knew he was. I'd never said, 'You are singling me out; you are doing this, you are doing that.' That's when I really decided that it was going on and that there wasn't anything I could do about that so I kind of gave up after that. I didn't try to do my best after that but I got better grades. (Second year student, female)

Another major source of discouragement for many students in clinic is the complicated procedure required to get work done. While it is extremely important that student work in the clinic be monitored carefully--both for the sake of the patient and to insure student training--the burden of securing faculty assistance, and often of making the final treatment decisions, rests with the students.

The system doesn't allow you any clinical judgment whatsoever and in diagnosing your patient, well, a person usually needs more than one department's worth of work--he isn't just an operative patient, he needs other things too. Well, in this case you run around to all these different departments and collect signatures and you usually find five different opinions if you talk to five different doctors. And you're the ultimate one that has to choose what to do; it's very frustrating because you don't know, you have no judgment to base the decision on. So you run around and waste a lot of time doing that before you even get started doing anything at all. You're not really getting any credit for it--you're just running around. OK, that was one major factor--I felt like I was spinning my wheels, not getting any place. (Fourth year student, female)

Another problem is related to the preceding one. Students are required to get a great deal of clinic work accomplished in order to graduate. Clinic work insures that a student gains sufficient experience in all aspects of dental practice. Student clinic work also helps to generate important revenue for the school. So the students are under considerable pressure to get their work accomplished and spending time collecting signatures can not only be very exasperating, but it also cuts down on time available to spend with clinic patients. The woman student below feels that the cost of this pressure prevents her from spending adequate time establishing patient relationships, and her constant rush to get the work done precludes taking time to express warmth or sympathy for the patient.

You can't take time with patients because then you don't see enough patients in a day and you don't get enough credit hours and... I mean you don't get enough pedo done and you don't get enough perio done so you have to regiment yourself and you are regimenting the whole time. You almost have to be cold. You have to be able to turn like a faucet, on and off. (Group interview, third and fourth year students, female)

Obtaining the right mix of types of clinical work can also be a problem. Less common dental problems may not show up with enough frequency for every student to collect sufficient credits for particular procedures. While this is a problem for all students, women students at one school were particularly criticized for it:

There was a problem in the perio department and the chairman of the department singled out the girls as the source. The chairman has felt girls are 'different'--he likes to generalize that way, and the girls resent it. He wrote a letter to three or four girls that they are not seeing the patients they should be seeing, not doing the right type of procedures, and therefore not doing satisfactory work. This letter was not sent to any of the guys which was kind of bizarre. I didn't expect it of him, but he has singled out the girls as being guilty of something that not just the girls are guilty of--me too, but it's not my fault, the patients just aren't there, it happens very often--so often, that the department chairman has said something should be done, he doesn't like it. In the rest of the class, no one feels it is the girls' problem--takes two to tango... if a patient cancels, no one can do anything. (Second year student, male)

Licensure

State licensure requirements are relatively similar from state to state, compared to those in equivalent professions. Requirements include: graduation from an accredited dental school; passing grades in licensing examinations; U.S. citizenship or declaration of intent; and payment of fees ranging from $25 to $100 for examinations and from $5 to $50 for registration.

The National Board of Dental Examiners is an independent association supported by examination fees from students. National boards are taken twice during the course of dental education; the first part (written) at the end of the preclinical years or their equivalent; and the second part (practical and written) just prior to graduation. Examination fees are $100 per test. Portions of the tests may be retaken as necessary.

The state dental licensure examinations are in two parts, written and practical. The practical portions vary widely from state to state. All states except Delaware (and Puerto Rico) accept the National Board of Dental Examiners certificates in lieu of written exams. Practical exams may be given by the states or regional testing groups for subscriber states--the Central Regional Dental Testing Service (10 states) and the North East Regional Board (11 states). Applicants must provide patients for the practical tests and frequently equipment and supplies as well.

Limited or full reciprocity between states is practiced by seventeen states and Puerto Rico, and only fourteen states and the District of Columbia require licensure of dental specialists.

Postgraduate Education

Historically specialization has not been encouraged by the dental profession, although the number of dental graduates doing internships has been increasing recently. Postgraduate specialties recognized by the ADA include dental public health, endodontics, oral pathology, orthodontics, pedodontics, periodontics, and prosthodontics. Unlike medicine, specialization training is not normally undertaken immediately upon graduation from dental school. The average new graduate is usually in considerable debt and needs to begin practice since loan payments generally begin shortly after graduation. Once a dentist is established in practice, however, it becomes more difficult for him/her to leave it to return to school particularly if the practitioner has a large investment in equipment for which s/he is still paying. Women who are married may find themselves particularly handicapped by their lack of mobility and inability to move wherever specialty training might take them, although current data shows women entering specialties in proportionately equal rates as men. Training in specialties is conducted by both dental schools and by other training institutions (primarily hospitals). All 58 schools offer one or more postgraduate programs. Graduates receive either a certificate or a degree.

Specialty Certification Boards exist for the eight recognized specialties mentioned above. The Boards certify programs as well as practitioners. Most of the dental school postgraduate programs have Board certification, as do many of the hospital-based training programs.

Starting Practice

An increasing number of graduates are seeking out group practices or partnership positions. Those who choose to set up private practices, however, are faced with serious choices. The ADA publishes a booklet to help the practitioner decide where to locate in the United States. The booklet includes information on number of practitioners per population and average practitioner incomes. Income is an essential issue because most students are heavily in debt from educational loans, and the graduate who wishes to enter private practice must now also purchase equipment, rent office space, hire auxiliaries and office personnel, and pay licensure fees before s/he generates any income. Another possibility is to buy out an existing practice, but this also requires an extensive capital outlay prior to beginning work. To offset some of this expense, it does appear that practitioners do not seem to encounter great difficulties in obtaining bank loans to establish a practice, and dental supply companies are willing to sell equipment on a time payment basis. It is estimated that the cost of starting a practice from scratch ranges from $30,000 to $50,000, and the practitioner normally has cash-flow problems for the first few years at best.

V. DENTAL STUDENTS

WHO THE STUDENTS ARE

In our efforts to describe and compare similarities and differences in the characteristics and experiences of men and women dental school applicants and students, we have relied liberally on the results of a 1975 nation-wide survey of dental students conducted by Jeanne Coombs for her PhD dissertation from the Harvard School of Public Health. (21) Her data is recent, comprehensive, and confirms many of the impressions we obtained from our study respondents in our field research.

Demographic Characteristics

Four years ago the average dental student went directly from college to dental school (Table 20). For both men and women the current trend is to take time out before entry into the professional program. Since women are even more likely to delay prior to entry, they are somewhat older than their male counterparts.

TABLE 20

PERCENT OF WOMEN AND MEN WHO ENTERED DENTAL SCHOOL DIRECTLY FROM COLLEGE BY CLASS

	FEMALES--PERCENT				MALES--PERCENT				
	FIRST YEAR	SECOND YEAR	THIRD YEAR	FOURTH YEAR	FIRST YEAR	SECOND YEAR	THIRD YEAR	FOURTH YEAR	TOTAL
YES, ENTERED DIRECTLY	54.7	60.3	59.7	74.0	59.6	73.3	75.3	82.4	65.3
NO	45.3	39.7	40.3	26.0	40.4	26.7	24.7	17.6	34.7
TOTAL PERCENT	25.2	14.5	7.7	7.8	12.2	12.8	8.2	11.5	100.0
TOTAL NUMBER	236	136	72	73	114	120	77	108	936

SOURCE: *Coombs, Jeanne A., A Nation-wide Study of Women in U.S. Dental Schools, PhD Dissertation, Harvard School of Public Health, Cambridge, Mass., 1975.*

TABLE 21

PARENTS' EDUCATION

	WOMEN(N=517)		MEN(N=417)		TOTAL (N=934)	
	Father	Mother	Father	Mother	Father	Mother
8th Grade or Less	8.1	5.8	7.3	6.3	8.0	6.1
Some High School	6.4	6.1	8.4	5.2	7.3	5.6
High School Graduate	14.3	27.7	27.7	36.8	17.8	31.3
Some College or Vocational School	19.5	25.9	20.6	28.9	20.6	27.6
College Graduate	16.9	18.0	15.7	14.0	15.8	16.0
Graduate or Professional Degree	34.2	16.5	25.9	8.8	30.1	13.2
Don't Know	2.3	0.2	0.0	0.0	0.4	0.2

SOURCE: Coombs, Jeanne A., A Nation-wide Study of Women in U.S. Dental Schools, PhD Dissertation, Harvard School of Public Health, Cambridge, Mass., 1975.

Table 21 illustrates the educational levels of dental students' parents. It is interesting that women's fathers and mothers are both more likely to have graduate and/or professional degrees than the men's parents. This is reflected in the larger numbers of health professionals, expecially mothers, among the women's parents (see Table 22).

TABLE 22
PARENTS' OCCUPATIONS

	FATHER		MOTHER		
	MEN	WOMEN	MEN	WOMEN	TOTAL
Dentist	34	59	0	5	98
Physician	18	29	1	3	81
Other Health Professional	13	15	12	38	78
Other Professional	67	101	29	53	250
Managerial	122	127	21	21	291
Sales	25	27	8	5	65
Clerical	6	9	50	44	109
Skilled Craftsman	50	60	4	5	119
Semi-skilled	39	20	5	8	
Unskilled	12	16	13	10	51
Farmer	10	17	0	4	31
Housewife/husband	0	2	267	310	579
Miscellaneous	18	28	6	8	60
Total	414	510	416	514	1,854
	N=924		N=930		

SOURCE: *Coombs, Jeanne A., A Nation-wide Study of Women in U.S. Dental Schools, PhD Dissertation, Harvard School of Public Health, Cambridge, Mass., 1975.*

Information on entering student GPAs and test scores does not seem to be available by sex. However, it is clear from talking to admissions committee faculty and administrators, that women applicants are highly competitive, although women, on the whole do not score as well as men on the science and PMAT sections of the DAT. As of 1974-75, 68.8% of all dental students had acquired a BA prior to or during their professional education, and an additional 4.7% have master's or other degrees.

A significantly larger proportion of male students are married; and women are more frequently divorced, separated, or widowed, as Table 23 demonstrates.

TABLE 23

MARITAL STATUS OF DENTAL STUDENTS, BY SEX
(by percent)

Marital Status	Men (N=419)	Women (N=517)
Married	54.1%	38.9
Single	44.1%	57.6
Divorced, Separated, or Widowed	1.8%	4.4

SOURCE: Coombs, Jeanne A., A Nation-wide Study of Women in the U.S. Dental Schools. PhD Dissertation, Harvard School of Public Health, Cambridge, Mass., 1975.

Reasons for Being Attracted to the Profession

Table 8, p. 14 outlines the national data on students' reasons for interest in the profession. Our respondents supplied the following comments on why they chose dentistry.

> *I've had about five years of experience working for men in dental offices as a hygienist and I was much better off in that hierarchy than, say, the dental assistants and receptionists and I was still in a position of seeing things done all the time that were not done the way that I thought they should be done. And also of having to take, you know, orders, to have to ask permission for everything I was doing rather than simply being able to do what I knew was the right thing to do. And so I just decided after a while that the frustration would be there forever unless I did something about it. (Group interview, mixed years, female)*

> *One of the things I disliked about nursing school--which I found out much later--was the fact that I basically do not like sick people. Sick people are very unhappy, they become very paranoid, they're very ill--and I just don't like working with them period. (Fourth year student, female)*

> *... I always wanted to be in a health field. I was not happy with pharmacy here, working in a drugstore--maybe somewhere else it would be okay. The money was fine but I didn't enjoy it. I applied*

> *to medical school and was accepted. I decided after talking to a dentist--medicine has too much prestige. With dentistry, I'd have time for friends, family, and still can help people. (Third year student, female)*

These students all pursued other careers prior to entry. There is a long-held notion that dentists are disappointed medical school applicants, but the following tables on other professions considered and preferred clearly show that, while large proportions of dental students considered medicine, they did not prefer medicine to dentistry. It is important to notice that the proportion of men students preferring medicine drops from 20.3% among first year students to 6.5% among final year students. The proportion of women preferring medicine remains fairly steady (17.8% to 15.1%). (See Table 24.)

TABLE 24

OTHER PROFESSIONS CONSIDERED AND PREFERRED, BY FIRST AND FINAL YEAR MEN AND WOMEN

	Other Professions Considered				Other Professions Preferred			
	First Year %	Final Year %	First Year %	Final Year %	First Year %	Final Year %	First Year %	Final Year %
	Females		Males		Females		Males	
Medicine	63.1	60.3	64.6	52.7	17.8	15.1	20.3	6.5
Social Work	9.7	13.7	8.0	8.3	.8	1.2	0	.9
Dental Hygiene	11.8	13.7	1.8	.9	2.5	4.1	0	0
Teaching	33.9	21.9	32.7	26.9	2.5	0	2.6	.9
Business	3.4	8.2	13.3	13.0	.4	0	2.6	0
Law	8.5	6.8	18.6	14.8	.4	0	3.5	.9
Engineering	5.1	6.8	16.8	12.0	.4	1.3	.8	0
Architecture	3.8	4.1	10.6	8.3	0	0	.8	.9
Other Occupations (Professional science)	47.8	42.5	36.3	33.3	24.1	16.4	15.0	19.4
Total Number	114	108	236	73				

SOURCE: Coombs, Jeanne A.: A Nationwide Study of Women in United States Dental Schools, unpublished dissertation, Harvard School of Public Health, Cambridge, Massachusetts, 1975.

Table 25 below indicates that men and women students chose dentistry over other preferred fields for very different reasons. While they seemed to agree that the financial and career opportunities in dentistry are more attractive, a significantly greater proportion of women were not accepted to graduate school or lacked financial resources. Men more often felt that their college grades were too low or the training too long for other fields.

TABLE 25

REASONS FOR NOT PURSUING PREFERRED FIELD, BY SEX

Reasons	Percentage[a] of Students Who State as One of Three Major Reasons	
	Female	Male
Inadequate Pay and Opportunities	36.6	43.1
Not Accepted in Graduate School	35.9	26.5
Lacked Ability	22.1	19.7
Lacked Financial Resources	20.0	7.5
Lacked Appropriate College Courses	17.2	4.5
College Grades Too Low	13.8	21.2
Training Too Long	8.1	13.6
Total Number	200	168

[a] *Percentages do not total 100.0 because question required a multiple response.*

SOURCE: *Coombs, Jeanne A., A Nation-wide Study of Women in U.S. Dental Schools, PhD Dissertation, Harvard School of Public Health, Cambridge, Mass., 1975.*

A fourth year female student summarized her reasons for choosing dentistry, and most of our respondents would agree with her:

> *Oh, you can make your own hours, so it's easy to have family and other responsibilities and if you're going to take the total responsibility for the family it's very easy to arrange your schedule, hours and days, to be flexible with that. The work itself is hard--stress-wise--however there is little physical work involved in it. It's not like digging ditches. You can stay seated most of the time and you do fine work with your hands, and it's very pleasant talking with other people, which most men and women seem to enjoy. And there's a lot of--not manipulation--but techniques to making people more comfortable while they're sitting in your chair. And the pleasure of doing things with your hands and doing them well. (Fourth year student, female)*

Routes to the Profession

Table 26 makes it clear that in Coombs' study, parents and family dentists were the most important positive influences for both male and female students, and counselors were more likely to be a negative influence. Male and female friends were more often negative influences for final year women, while the first year women often found support from friends. This may be a result of increased acceptance of non-traditional roles for women among peers, but positive influences for women from parents diminished significantly during this same period. In fact, parents were far more commonly a negative influence for women in recent years (Table 27) with nearly half of the first year women indicating both parents as a negative influence. Male students, on the other hand, were not likely to find parents either a significantly positive or negative influence.

One male respondent commented on the negative responses of parents:

> *They thought that was the craziest thing they'd ever heard. They thought I was making a big mistake, I wasn't going to be happy, it was going to ruin my marriage, I could just kiss that goodbye, that I just shouldn't do it, I should go back to nursing school. Now as a senior in dental school I visited my parents over the summer and my mother still makes remarks to the effect that 'Gee, I wish you'd finish nursing school'. So they really don't accept it. However, because of the status business, they're proud of me; my father especially is very proud of what I've done. He was supportive, but my mother was not especially. (Fourth year student, female)*

TABLE 26

PERCENTAGE OF MALE AND FEMALE FIRST AND FINAL YEAR STUDENTS WHO CHOSE OTHERS AS ONE OF THREE OF MAJOR POSITIVE OR NEGATIVE INFLUENCES ON THEIR DECISION TO PURSUE DENTISTRY

	Positive Influences				Negative Influences			
	Female		Male		Female		Male	
	First Year	Final Year	First Year	Final Year	First Year	Final Year	First Year	Final Year
Father	42.7	57.5	45.1	43.5	11.0	5.5	7.9	7.4
Family Dentist	40.2	41.1	51.3	52.7	7.6	4.1	1.7	3.7
Mother	36.8	54.8	42.4	39.8	18.2	6.8	1.8	7.4
Male Friend	30.5	9.5	22.1	22.2	12.3	23.3	15.9	7.4
Female Friend	19.0	5.5	12.4	12.0	15.7	17.8	7.1	3.7
Spouse[a]	18.2	13.7	9.7	2.7	--	--	--	--
Counselor	14.8	9.5	6.1	13.8	11.4	20.5	14.2	13.9
Teacher	11.4	10.9	12.3	11.1	13.6	10.9	15.0	10.2
Male Relative	10.6	6.8	7.9	5.5	7.2	10.9	4.4	3.7
Brother	7.6	5.5	7.0	9.2	2.9	0	1.8	2.7
Sister	2.9	4.1	4.4	2.7	3.4	2.7	1.8	0
Female Relative	1.7	5.5	5.3	5.5	8.5	8.2	1.8	0
Total Number	114	108	236	73	114	108	236	73

[a] *Data only available on spouse as a positive influence*

SOURCE: Coombs, Jeanne A., A Nation-wide Study of Women in U.S. Dental Schools, PhD Dissertation, Harvard School of Public Health, Cambridge, Mass., 1975.

TABLE 27

PARENTS AS A POSITIVE INFLUENCE IN THE SELECTION OF DENTISTRY AS A CAREER, BY SEX AND CLASS

Positive Parental Influences	Female Percent FIRST YEAR	SECOND YEAR	THIRD YEAR	FINAL[a] YEAR	Male Percent FIRST YEAR	SECOND YEAR	THIRD YEAR	FINAL[a] YEAR	TOTAL
Neither Parent	27.2	14.9	9.1	5.3	12.0	13.1	5.6	12.8	100.0
Mother Only	26.2	15.1	8.7	8.7	14.3	7.9	8.7	10.3	100.0
Father Only	27.3	11.2	7.6	7.6	12.4	13.5	10.0	10.0	100.0
Both Parents	20.3	15.8	5.6	10.9	11.3	14.3	10.5	11.3	100.0
Total Number	236	136	73	73	114	120	77	108	935

TABLE 27A

PARENTS AS A NEGATIVE INFLUENCE IN THE SELECTION OF DENTISTRY AS A CAREER, BY SEX AND CLASS

Positive Parental Influences	Female Percent FIRST YEAR	SECOND YEAR	THIRD YEAR	FINAL[a] YEAR	Male Percent FIRST YEAR	SECOND YEAR	THIRD YEAR	FINAL[a] YEAR	TOTAL
Neither Parent	23.2	13.6	7.1	8.4	13.3	13.7	8.9	11.9	100.0
Mother Only	41.5	24.6	6.2	4.6	0.0	6.2	7.7	9.2	100.0
Father Only	21.7	15.2	17.4	4.3	15.2	8.7	4.3	13.0	100.0
Both Parents	43.2	16.2	13.5	5.4	5.4	10.8	0.0	5.4	100.0
Total Number	236	136	73	73	114	120	77	108	937

SOURCE: *Coombs, Jeanne A., A Nation-wide Study of Women in U.S. Dental Schools, PhD Dissertation, Harvard School of Public Health, Cambridge, Mass., 1975.*

But the most significant aspect of positive/negative influences for our women student respondents is dentistry's invisibility for women as a possible career choice:

> *I decided for dentistry, based on very limited facts and quite a large amount of naivete. For one thing, I thought I was the first woman dentist--first woman to go into dentistry. Nobody, even though I have a family who had always directed me towards a profession of one kind or another--as a researcher or really any number of things--my parents encouraged me 100%--but they never mentioned dentistry. (Second year student, female)*

> *For myself it simply wasn't an option, so I didn't even think about it. (Fourth year student, female)*

> *I had never known any dentist nor considered dentistry before but one day I was working in my lab, thinking, 'This isn't what I want to do for the rest of my life', thinking 'What can I do?" Like lightning from the sky it hit me--dentistry popped into my head. (Second year student, female)*

It does not seem to be of great importance that there be a dentist in the family for the student to make dentistry a career choice. The overwhelming majority of dental students do not have a dentist in the family, although women are slightly more likely than men to have a relative in the profession (Table 28).

TABLE 28

PROPORTION OF STUDENTS HAVING OTHER DENTISTS IN THE FAMILY AT THE TIME OF CAREER DECISION, BY SEX

	FEMALES		MALES	
	Percent	N	Percent	N
Father	11.0	59	7.2	31
Male Relative	11.0	59	11.6	50
Brother	2.1	11	2.5	11
Mother	1.1	6	.2	1
Female Relative	1.1	6	1.2	5
Sister	0		0	
None	73.7	395	77.3	333
TOTAL	100.0	536	100.0	431

SOURCE: *Coombs, Jeanne A., A Nation-wide Study of Women in U.S. Dental Schools, PhD Dissertation, Harvard School of Public Health, Cambridge, Mass., 1975.*

While we noted in Table 20 that were were more likely than men to delay immediate entry into professional school after their undergraduate education, it is also noticeable that the amount of time intervening has been greater for women in the past three years. First year women represented over a third of the delayed entrants, and of those, over half spent three or more years in other pursuits (see Table 29).

TABLE 29

LENGTH OF INTERVAL BETWEEN COLLEGE AND ATTENDING DENTAL SCHOOL
(FOR THOSE WHO DID NOT ATTEND DENTAL SCHOOL DIRECTLY) BY SEX AND CLASS

LENGTH OF INTERVAL	FEMALES: PERCENT FIRST YEAR	SECOND YEAR	THIRD YEAR	FINAL YEAR	MALES: PERCENT FIRST YEAR	SECOND YEAR	THIRD YEAR	FINAL YEAR	TOTAL
1-2 Years	43.8	38.9	41.4	65.0	52.2	43.8	68.4	52.6	47.1
3 Years	17.0	16.7	20.7	5.0	8.7	21.9	21.1	10.5	15.7
4-5 Years	17.9	18.5	17.2	5.0	21.7	12.5	10.5	15.8	16.6
6-7 Years	8.0	13.0	6.9	15.0	10.9	9.4	0.0	5.3	9.1
8-10 Years	5.4	11.1	6.9	5.0	0.0	6.3	0.0	10.5	5.7
11-15 Years	6.3	0.0	6.9	5.0	4.3	6.3	0.0	5.3	4.5
15-20 Years	1.8	0.0	0.0	0.0	2.2	0.0	0.0	0.0	0.9
20+ Years	0.0	1.9	0.0	0.0	0.0	0.0	0.0	0.0	0.3
TOTAL PERCENT	33.8	16.3	8.8	6.0	13.9	9.7	5.7	5.7	100.0
TOTAL NUMBER	112	54	29	20	46	32	19	19	331

Chi Square = 37.76, 49 d.f., p = .8783

SOURCE: Coombs, Jeanne A., A Nation-wide Study of Women in U.S. Dental Schools, PhD Dissertation, Harvard School of Public Health, Cambridge, Mass., 1976.

What these students did during the intervening years is shown in Table 30. As expected, women were more likely to spend time on marriage and children, and men in military service. Men were also more likely than women to delay due to "uncertainty about vocation" and to non-acceptance by dental schools.

TABLE 30

REASONS FOR NOT ENTERING DENTAL SCHOOL DIRECTLY FROM COLLEGE (by percent) (N = 322)

Reasons	Women(Percent)	Men(Percent)
Pursued Other Professional Career	21.3	18.3
Attended Other Graduate School	19.8	18.3
Need to Work	15.9	13.0
Marriage and Children	13.0	.9
Uncertainty about Vacation [sic]	9.7	14.8
Not Accepted at Dental School	2.4	7.8
Military Service	.5	20.0
Miscellaneous	17.4	7.0
PERCENT TOTAL	100.0	100.0
NUMBER TOTAL	207	115

SOURCE: Coombs, Jeanne A., A Nation-wide Study of Women in U.S. Dental Schools, PhD Dissertation, Harvard School of Public Health, Cambridge, Mass., 1975.

An important difference in the use of this intervening time is that women were far more likely to gain health-related work experience (Table 31). Well over half of the women worked in health fields at some point in their lives, and nearly a quarter in dental-related work, while only 3.4% of the men show any direct work experience in dental care.

TABLE 31

PERCENTAGE OF STUDENTS REPORTING PREVIOUS WORK EXPERIENCE IN THE HEALTH FIELD, BY SEX

Health Work Experience	Female		Male	
	Percent	N	Percent	N
None Previous	41.8	214	73.9	306
Dental-Related	24.5	125	3.4	14
Other Health-Related	33.7	172	22.7	94
Total	100.0	511	100.0	414
Chi square = 118.9 *2 d.f., p < .001*				

SOURCE: Coombs, Jeanne A., A Nation-wide Study of Women in U.S. Dental Schools, PhD Dissertation, Harvard School of Public Health, Cambridge, Mass., 1975.

A factor in this discrepancy is the number of former hygienists or hygiene students who have entered dental school in recent years.

Male students more often than women were repeat applicants to dental schools, and as Table 32 shows, the proportion of repeat applications for women has diminished in the past few years.

TABLE 32

WHETHER STUDENTS APPLIED TO DENTAL SCHOOLS IN ANY YEAR PRIOR TO THE YEAR ENTERED, BY SEX AND CLASS

PRIOR APPLICATIONS	FEMALE: PERCENT				MALE: PERCENT				TOTAL
	FIRST YEAR	SECOND YEAR	THIRD YEAR	FINAL YEAR	FIRST YEAR	SECOND YEAR	THIRD YEAR	FINAL YEAR	
NO	91.1	89.0	88.9	84.5	81.4	85.7	80.5	81.5	86.3
YES	8.9	11.0	11.1	15.5	18.6	14.3	19.5	18.5	13.7
TOTAL PERCENT	25.2	14.6	7.7	7.6	12.1	12.8	8.3	11.6	100.0
TOTAL NUMBER	125	136	72	71	113	119	77	108	931

Chi Square = 12.50
7 d.f., p = .085

16 missing observations

SOURCE: *Coombs, Jeanne A., A Nation-wide Study of Women in U.S. Dental Schools, PhD Dissertation, Harvard School of Public Health, Cambridge, Mass., 1975.*

Assessment of the Profession from the Inside

Since women students were more likely to have dental-related experience, they more often felt that their image of dentistry prior to entering dental school was accurate (Table 33). However, a surprisingly large proportion of males also felt that this image was accurate.

TABLE 33

PERCENTAGE OF STUDENTS WHO FEEL THAT THEY HAD AN ACCURATE IMPRESSION OF DENTISTRY PRIOR TO ENTERING DENTAL SCHOOL, BY SEX

	Female Percent	N	Male Percent	N
Accurate	49.0	252	31.5	132
Inaccurate	51.0	262	68.5	287
TOTAL	100.0	514	100.0	419

SOURCE: Coombs, Jeanne A., A Nation-wide Study of Women in U.S. Dental Schools, PhD Dissertation, Harvard School of Public Health, Cambridge, Mass., 1975.

Table 34 makes it clear that dental-related work experience is helpful in forming an accurate image of the field.

TABLE 34

THE ACCURACY OF STUDENTS' IMAGE OF DENTISTRY AS A FUNCTION OF PRIOR WORK EXPERIENCE IN THE DENTAL FIELD

Image of Dentistry	WOMEN: No Dental Work Experience Percent	N	WOMEN: Prior Dental Work Experience Percent	N
Accurate	36.0	138	89.5	111
Inaccurate	64.0	245	10.5	13
Total	100.0	383	100.0	124

Image of Dentistry	MEN: No Dental Work Experience Percent	N	MEN: Prior Dental Work Experience Percent	N
Accurate	29.5	118	85.7	12
Inaccurate	70.5	282	14.3	2
Total	100.0	400	100.0	14

SOURCE: Coombs, Jeanne A., A Nation-wide Study of Women in U.S. Dental Schools, PhD Dissertation, Harvard School of Public Health, Cambridge, Mass., 1975.

THE EXPERIENCE OF BEING A DENTAL STUDENT

The students we interviewed during our visits to dental schools--both men and women--more often expressed unhappiness and distress with their experience in school than did students in any of the other MODVOPPP schools. A marked contrast between dental students and those in the other MODVOPPP professions was that dental students generally concentrated their remarks on the training institutions themselves. In other professions, many of the problems students described were problems that they saw as emanating from the professions or from the position of the profession vis-a-vis others and society. Male medical students, for example, often expressed concerns about the pressure that will face in practice due to current societal questioning of the authority of health professionals, but they did not see this as a problem created by the training schools. Similarly, students in podiatry and optometry, for instance, often expressed concern that they will not be allowed in practice to the fullest extent of their skills because of the resistance their professions encounter from bordering medical specialties. But dental students, given the opportunity to talk about their problems in becoming dentists generally focused on the problems they encounter as students in the schools.

The dental schools we visited exhibited varying degrees of tradition in curriculum and pedagogic style, and one or two were actively involved in efforts to change and experiment with new forms of both. However, in general, administrators and faculty seemed less inclined than those in the other MODVOPPP professions to experiment with current and innovative teaching theories and curriculum content. Typically, schools operated by traditional rules and procedures. As one student described it:

> *It is like being in kindergarten. Every period you are told where to be. They take roll in many courses and one instructor has threatened to lock the doors at 8:10 this year because he doesn't like students walking in late. (Second year student, female)*

The emphasis in the schools we visited was on learning the skills of dental technique. While many health professions are now experimenting with courses which teach students how to deal with patients, such orientation seemed limited

in most dental schools. Courses on dental practice management were also described as insufficient and superficial by many of our respondents. One of the students we interviewed had previously been to nursing school and was thus aware of a gap in her training, a gap which she took seriously.

> *I think one of the big lapses in that they did not teach us how to talk to a patient. There are a lot of ways to ask questions, to get information, and they didn't teach us anything about that. So you just go do your own thing, and you may or may not be getting correct information out of people. I think it's a crime.*
>
> *The other thing we don't really get any of is how to run a dental practice. They aren't getting down to the things that you really need to know. (Fourth year student, female)*

One of the dental schools administrators with whom we spoke acknowledged that until recently pedagogical skills were not a prerequisite for a faculty position:

> *A few years ago, the fact that you had a dental degree automatically made you qualified to teach in dental school, whether you had ever heard about education or not, whether you had ever heard anything about psychology or learning. (Administrator, male)*

Though many dental faculty have little training as teachers (as is true in most professional and graduate schools), they do appear to share a particular pedagogical style which seemed to us to prevail in all of the schools we visited. The students describe this style as the "show and tell" method and the "check and re-do, re-do" approach. A fourth year woman student described the "show and tell" method this way:

> *In Operative they do it all by show and tell. You look at it in the very beginning and it's very hard to know what they want. They'll show you the thing, but they don't really write down all the things that they're looking for, what the preps are supposed to look like, and so forth. It's very confusing because your eye isn't trained. You can't see what it is that they're showing you because you haven't seen it before; I think they could do much better about telling you what it is they want. (Fourth year student, female)*

A clinical faculty member verified this students' observation and told us what happened to him when he tried to be more helpful to the students:

It's supposed to show up pretty soon whether you can make it or not, unfortunately, without too much help. I'm pretty critical of that. I have tried, for instance to show a student exactly how to do it, with the result that the department chairman say, 'You're not supposed to do it for the students.'

I believe that you have to demonstrate certain things--how to hold onto an instrument, how to go about it. But the moment you do that there will be people who will say you're doing the students' work for them, so how then can you give them a grade. That distinction between checking things and teaching things is, I think, very important. (Clinical faculty, male)

The pedagogy of "checking" rather than "teaching" is one which the students recognized and discussed frequently. One result of this teaching style is to discourage a trusting relationship between many students and faculty:

You can walk in in the morning with the perfect thing and they'll have you rip it apart and put it back together again. It seems like it's just because they want to see you do it, or maybe because it's better than something they would do and that upsets them, so they make you do it over.

Sometimes I'm afraid to show them things because I'm afraid they'll do something to it. They'll come by and say, 'That's not any good', and then they'll take a knife and they'll cut it up. 'Do it over.' 'Re-do.' They run around saying, 'That's a re-do.' (Second year student, female)

One of the male administrators we interviewed said he found the emphasis on technical requirements disturbing, but in light of clinical rather than pedagogical theory:

This is a traditional problem. It happens all over the place. As education becomes a little more sophisticated, then some of the people that are stuck in the mud in terms of a technical requirement... shake their heads, 'We're going to hell in a handbasket, the whole thing's going down the drain.' They are trained as good technicians with excellent dentistry, but they are not looking at the whole picture. They will do excellent restorations, but disregard the supporting tissue. (Administrator, male)

Another problem for many students with the "check and re-do" teaching style is that they expressed a feeling that their work is often wasted since they may not learn what they did wrong. One of the fourth year women students described an extreme example:

I guess the best example is Dr. ___. He should be fired. He's very unpleasant and abrupt. He will say that your work is a pile of shit, and sometimes he will tell you that, just like that. He's very quick to have you do it over again rather than tell you how to fix it to make it right. He'll just say, 'Rip it out and do it over.' (Fourth year student, female)

Students spoke of learning how to avoid a "re-do" by picking and choosing among the faculty members who do the checks. A fourth year students described the process:

Well, I learned by trial and error. That can be a very frustrating experience. It's the hardest thing, I think, about junior year. A lot of these instructors you haven't had any dealings with before and they don't know your work either, so you're discovering one another. You find out who's a hard check and obnoxious, and who's a hard check but is fair and you learn something from. (Fourth year student, female)

Students often talked about the way in which this kind of teaching makes them feel at the mercy of their instructors:

The school itself is really a horrendous experience. It's really horrible and you can't really understand unless you've gone through it. Every step along the line you have to get a check on something, you have to get a signature on a little card. Because you're always having to ask for these signatures, they can really put the screws on you. There's a lot of opportunity to say that you didn't do it very well. Some departments will say, 'You've really screwed up, you dummie', and you can get the impression that they're attacking you personally just because you didn't do it quite the way it's supposed to be.

In other departments, and with other people, they don't say you didn't do it very well. They'll just point out the ways you can improve it. That's really nice. I just had that experience yesterday--I learned something--that's very unusual. (Third year student, female)

Students also frequently spoke about the way in which this control forces them to worry about staying on the faculty's "good side":

The instructors rule whether you graduate or not. You get graded here just as a pass/fail and if you are on the wrong side of the teacher, they'll give you bad grades and you'll have trouble graduating. So you gotta keep on their good side.

There's this one instructor who has dropped me a whole grade from what my own individual instructor has given me, and three times in a row--from a B to a C, from a C to a D. He's got me just petrified. I don't want to get on his wrong side. He's the head of the clinic; you get on the wrong side, he will say you cannot graduate. (First year student, female)

"Check and re-do" may be an appropriate pedagogy for dental training. But it is the style of its execution that makes students so unhappy. The following remarks from two first year students are illustrative of sentiments we heard many times:

They just really work you to the bone. I mean, since I've been here I've been given two whole compliments--in the entire seven months I've been here. They batter you. (First year student, female)

There just does not seem to be much of a feeling of warmth and support between the faculty and the students. That's why this school is kind of sick. They inbreed, all their own. These guys figure, 'When I was in school they stepped on me and they gave me a rotten time, so I'm going to give these guys a rotten time.' And they just go around stepping on people. (First year student, female)

The students report that all of this eventually makes them react with cynicism, disillusionment, and negativism. The following excerpt from a group interview with women students in all years summarizes what many students said their reaction to dental school is:

R^1 *Even though we are going to a good dental school, I'm afraid that they are going to make me so meticulous and cynicial and negative that when I get out, and I'm no longer being screwed, that maybe I'll be just as sloppy as if I'd gone to school somewhere else. They don't have a real desire for you to put out top notch work because you are not rewarded for it. You'll just get a B on it. It doesn't matter how good something is that I do anymore. I've come to the conclusion, you know, 'Why bust my tail?'*

R^2 *Well, there's not a lot of faculty/student communication here, that's one of the problems, I think. That's one of the big problems.*

R^3 *If I turn out something sloppy, I get a B on it, and I bust my tail and I still get a B. That happens all the time, and it's lots worse in some courses. I bust my tail and I get a C; and I kind of slide through and I get a B. So there's no incentive and it's not worth it.*

I *How do you get cynical?*

R^3 *I'll tell you how. As a freshman, I can tell you that a lot of us put in many hours studying, and they'll give you a test with trick questions.*

R^4 *It's harassment. It's constant harassment.*

R^2 *And I think they have an idea that they don't want to give anyone good grades because they don't want people to think that dental school is easy. The harder they make you think it is, and the harder they make the public think it is, that's how much, you know, your fees are going to be. It's very difficult to become a dentist. Therefore, it is expensive to get their services.*

R^4 *By the time you get out, you realize that dentistry isn't everything you thought it was when you came in because when you come in you don't know what it is. When you get out you know what it is. It's hard work.*

It's all well and good to be independent and be the boss, but there's a whole lot of hard work. And dentistry can be very boring also. And so you become kind of disillusioned. You've been harassed for four years, and you're getting tired of going to school; your attitude changes and you become cynical.

R^2 *Just wait, I mean I know. After four years, it really got me down to think about how much I've changed. (Group interview, mixed years, female)*

The male students express the same cynicism as the above group of women do. In the following excerpt from a male group interview (mixed years), they express their feeling that this stress they undergo is unnecessary:

R^1 *Somebody's going to pay me back for all I've been through. I've got cigarettes, chapstick, mentholyptus, rolaids. Nobody used rolaids until they got here; we're being programmed for stress--like the fact that we're not going to have enough money to live on because we have such huge debts when we get out.*

R^2 *We need to serve ourselves better if we are going to serve the public better.*

R^3 *We need to learn to avoid stress, to preserve our peace of mine. Good dentistry takes time. I don't believe we need to be subjected to the kind of stress that we are here. They're teaching us to set up those kind of stressful practices which cause the early death rates of dentists--it's 53 or so. Why can't we be normal while we're here? (Group interview, mixed years, male)*

Students sometimes conclude that the pressure of the training process must be deliberate in order to teach them to be a certain way. The interpretation they sometimes made is that the process may be intended to build character traits necessary for practice.

> *I guess they're building your character or something. If you can stand up to this, then it will all be the better for you--that kind of mentality. And it's the type of thing where 'I had to go through it, now you have to go through with it, too.' (First year student, female)*

> *At school, you develop an aura of confidence (whether you feel it or not) because in practice you're going to need it. (Second year student, female)*

But another interpretation is made by the students too--that the process results in making one insecure:

R^1 *Education is an adversary system between students and faculty. It results in practitioners being insecure. Today's practitioner doesn't strike me as an outgoing, secure person. Maybe it's the nature of the work.*

R^2 *If you beat a dog long enough, he'll be shy. (Group interview, mixed years, male)*

In institutions where students reported they were being "programmed for stress", they also described situations where letting off steam to relieve pressure and tension may be the result:

> *The hardest thing is coping with the guys who are in the class. They are really a bunch of dumdums. You can talk to almost any professor out there. Most of them are paranoid when they come to talk to our class because we have so many loudmouths, so many rude, small people. They just cut down everybody at any chance. They constantly make off-the-wall comments in the back of the room to anyone that's lecturing.*

> *The average age in our class is 26 and they act like they're 14. It just surprises me that guys can have gone all the way through college and are becoming professional people and act like little boys. (Third year student, female)*

> *Some days I can hardly believe that I am in a college. It's not just the things they [male students] do to me, or generally, they'll do it to guest professors. They're really horrible to them. (Second year student, female)*

THE EXPERIENCE OF BEING A WOMAN DENTAL STUDENT

When women enter dental schools, they encounter strong sets of beliefs and stereotypes about their traits and abilities as women. Many of their daily school experiences are involved with male faculty, administrators, and students, whose behaviors clearly express those beliefs to the women. This is so in all professional schools. But dentistry seems unusual among the MODVOPPP professions in the degree to which stereotypes about women are expressed and acted upon. In the following section our field interview data from dental schools are organized around four clusters of beliefs about women: women do not belong in dentistry; women are not serious and committed to dentistry as a career; women are not intelligent and capable of good work in dentistry; and women are too emotional to be capable of professional objectivity. In each of these sections we will give examples of men stating their views of women and examples of behaviors toward women which are based on those beliefs as reported to us by women students.

Many of these beliefs and behaviors damage women's chances of being regarded as good professionals, because many beliefs about them are the antitheses of beliefs about what a good professional is like. And as we have seen in the previous section, what instructors think of students is very often critical to their success in school. In addition each of the above clusters of beliefs sets up for women a double bind--that is, if they do exhibit behaviors considered appropriate to a profession they are regarded as unfeminine. Similarly, many feminine behaviors in our culture are considered unprofessional. Thus there are costs to either kind of behavior. The double-bind is a "can't win" situation.

Dealing with the Beliefs that Women do not Belong in Dentistry

One of the women we interviewed summed up the constant disbelief and astonishment people express about her intentions to become a dentist. When asked what problems, if any, she encountered in becoming a dentist, she replied:

Being a Ripley's Believe It or Not. (First year student, female)

Two of the administrators we interviewed discussed the traditional belief that women are inappropriate in dentistry. But both felt that this belief is changing:

> *The faculty has changed, and attitudes have, too. Some of the old timers finally will admit that a woman can be a dentist--and a good dentist.*
>
> *I remember, oh, in 1969 and 1968, we admitted three females that year. That was the highest of all time. It was a scandal. We previously had one. We had one who entered in 1953 and one in 1964. But I do recall when we had those first three ladies in class, there were all sorts of comments from faculty--negative type ones. Like, 'What are women doing in our profession'--our profession. Now you don't get that kind of attitude coming to the surface. (Administrator, male)*
>
> *The older ones, you know, that went through school five* [sic] *or more years ago--they always consider it a man's profession. (Administrator, male)*

A third year male student expressed the common view that dentistry is still a male profession, but that there is a place for women in the profession:

> *If you want to sum it up in a few words, medical school is for the male. I would say that's a pretty general opinion with most people. I think there's a place for the woman in the health professions, too. It's great for you to have women doctors. So there is a place, but it is basically a male profession. (Third year student, male)*

A fourth year woman student's description of the response she often gets from male students is illustrative:

> *The male students say to me, 'What are you doing here? You already have another profession (chemist) and a husband who can support you.' I think they resented me at first. (Fourth year student, female)*

Women also often reported that their families and friends outside of dentistry and people within the profession as well have a difficult time comprehending their intentions to be a dentist:

> *I still have to convince my parents that I'm actually doing this. We are tired of trying to convince people, saying ten times we're in dentistry.*
>
> *The interesting thing is that even in the Medical Center on the dental floor when I wear a white clinic coat, they always think I'm a hygienist--even people who work in the dentistry department. Then you have to stand there and*

convince them, and somehow they make you feel like a liar. (Group interview, mixed years, female)

Being unusual--which women dental students are by virtue of their very few numbers--sometimes provokes a response of curiousity and inquiry, and sometimes hostility. Women in dentistry seemed to us to encounter a greater number of negative responses to their presence than women in the other MODVOPPP professions do. A first year woman student related that:

I used to get cat calls when I walked into class, and cracks. I get it once in a while now, but I just ignore it. (First year student, female)

A third year woman student's comments were representative of many:

They'll do things like say, 'Oh, some bitch came into my office the other day--oh, I'm sorry, some woman came in.' They kind of look down at us in the audience. I've just gotten used to that, I guess. I think it happens all over, not just here. I think men just tend to--well, I think women just haven't reached the point where they're completely equal yet. (Third year student, female)

Dirty jokes and nudie slides are a classroom tradition in most traditionally all-male health professions schools. Their continuation when women are present creates an uncomfortable situation for many of the women students. The following excerpts from interviews with two women students are illustrative:

Dr. _____ was speaking, he's a very well known person. He brought out these slides. He'd put in these slides of topless dancers, and took his pointer and circled each of their breasts. He was referring their breasts to the points on the tooth. (Fourth year student, female)

Maybe it's a good way to release their tension. We had a professor of dental anatomy who always told dirty jokes in class. The filthier the better. Some of them weren't all that funny, but he really encouraged that sort of attitude. I don't know, maybe I'm making all these wild generalizations, but it just seems like when they do laugh and make fun, it's always a sexual thing. (First year student, female)

Being unusual and the potential object of tension understandably results in the feeling many women expressed that they are highly visible and conspicuous:

I've had a feeling since I've been in dental school that people were watching me and wondering, you know, 'Can she do it?' 'Are the women going to make it?' in ways that they don't watch and wonder about the men.

And I've kind of had a feeling that I don't want to flub up anything because I'm carrying the weight of women's credibility on my shoulders. I don't ever want to make a mistake that would make people say, 'Well, she's just a dumb broad.' (Group interview, mixed years, female)

But with so few women in dental schools, the anonymity of being a natural and expected part of the situation simply is not possible:

There is a big push to conform here. They want you to be passive, no trouble, no questions, don't let anyone know who you are, don't ask stupid questions, keep your mouth shut. But it's hard for us; women stand out. (Group interview, first and second year students, female)

Dealing with Beliefs that Women are not Serious About and Committed to Dentistry

The belief that women should have a primary commitment to husband and family over career appears pervasive. One of the male students we interviewed put it succinctly:

If I were their husband, I would rather have them home raising kids. Maybe that's a chauvinist attitude but they're not being that productive with the education skill that they've learned. Who knows? They may never raise kids. A lot of my friends kind of look down on the women. (Group interview, mixed years, male)

Because of the assumption that family life should be a primary commitment for women, a woman's intentions to practice are frequently questioned:

People ask, 'You're not going to work, are you, after you have a baby?' They'd never ask a man that. Everyone, strangers even, take it upon themselves to question a woman's ability to have a profession and a family. 'How will you manage?' It's a source of continual irritation. (Group interview, mixed years, female)

This view of the conflict of women's career aspirations and family life is presented as an either/or situation. Women who demonstrate a career choice are assumed to have given up the normal feminine role:

R Housewives tell me I'm being too masculine. You know, how come you want to go into such a masculine field?

I What housewives?

R Well, my husband was in dental school here when I applied. Mostly the wives of the dental students that we saw socially and they were just really--some of them, they just looked at me like they thought I was going to the moon. 'Well, don't you want a family and kids like normal women do?' You know. (Group interview, first year students, female)

You feel ambiguous because you want to be accepted as a professional person and you still want to be recognized as a woman and be able--I still want the differences which I feel are between male and female. I still want to be recognized as not an unfeminine person just because I'm a professional. (Group interview, first year student, female)

At social events I don't come right out and tell people I'm in dental school. Like my husband, when he was in dental school everybody knew about it. As soon as we went to a party--oh, he's in dental school and it's a big deal but now, I don't say anything about it unless somebody asks me what I do because I don't want to get in the hassle of it, you know? (Group interview, first year student, female)

One of the male administrators we talked with expressed a unique view: He felt that women students were perhaps more dedicated and motivated than male students and that they are able to manage family responsibilities while maintaining very good grades:

I don't know, it's kind of hard to really put a finger on it, but one of the things that I think perhaps would be outstanding is that perhaps there's a greater dedication, or maybe a greater motivation in the female students generally than in the male students.

I'm thinking that in the male student body, you can identify groups of students who are inspired or are highly motivated. There are identifiable groups of students who are inspired or highly motivated and then there are maybe a few that can be positively identified who are trying to get through with the least amount of effort. I wouldn't want to call them playboys but they have other interests and though they manage to survive in dental school, they're not putting out their best effort. With women generally--I have yet to see a woman student who is, shall we say, seeking to get by, who has other interests.

It doesn't matter how much pressure she may be receiving from, let's say, her homelife where she may have several children. And having to play the wife role, that is to go home and maintain a home and perhaps make meals and things like that.

With all the domestic arrangements that take place, one would think that the husband would be more sympathetic. I imagine that in most instances, he is, but nevertheless they do not lose their identity as mother and housewife, in terms of the domestic scene, and at the same time they are able to maintain very good grades, good standing in school. (Administrator, male)

Dealing with Beliefs that Women are not Competent as Dentists

Though most faculty and administrators we interviewed told us that women applicants are certainly as well qualified as the men and that they do well in school, the male students usually did not share those views:

R^1 *I think, in general, the qualifications of the group of girls are not as high as the qualification of, in general, the group of men because they don't have the competition.*

R^2 *There has to be X number of girls in dental school, so they take them regardless. I'm not saying they aren't qualified--but if you're wearing a skirt, you've got it made.*

R^3 *Nothing's fair, I guess.*

R^4 *They are a letter grade ahead of everyone else. Now on the didactic stuff, on the test, they have to get it down just like anyone else, but I wonder how they figure the averages--they just aren't that hot with their hands.*

R^1 *They don't look hard enough at the females. There are some I wouldn't want working on me. One who gets upset in class--I'm sure she got in because she's a girl.*

R^3 *If they're going to accept women, they'd better look hard at them. A lot of them just don't cut the mustard.*

If you have to have ten girls and only ten apply, it's unfair to people who are qualified. (Group interview, mixed years, male)

One of the administrators we spoke with acknowledged that he had seen some instances of what he called "bias" against women's performance:

I have seen this very clearly. I has Ms. _____ work for me here at the school, and she was going to take her state board for graduates of dental school. She did some practice preparations, went to a man in this school, and this person looked at this and said, 'Isn't it amazing that a little girl like you can do such beautiful work.' If that isn't bias I don't know what is. And this was right after we had a student appeal where a woman student complained about being treated with prejudice which he strongly denied--no prejudice he said, absolutely not. (Administrator, male)

Women reported innumerable instances of being told "you only got in here because you're a woman":

I'm not getting due respect as a dental student. Having gone to school for so many years you had to have certain grades to get in, and yet, when you're here, you're kind of put down because you're a woman. 'Oh, she's a woman, that's why she got in, they want to get women here.' It's like a status symbol, you know, a woman dental student--raises the white banner. A woman dental student, big deal--or laughter. Very depressing. (First year student, female)

Women reported that their work was frequently described as "being pretty good for a woman":

I took my class checkbook up to an endo instructor to get this procedure signed off. I finished the crown, got all that checked off. All I needed at that point was a signature from him to sign off on the endo. All he had to do was look at the other tag and sign off my tag. But he asked to see the x-rays. Fine. This didn't bother me, I got my x-rays. Then he looked at the x-rays and said, 'Hm, pretty good for a woman.' And I was just completely taken aback. There was a senior sitting next to him and the senior agreed. He said, 'Yeah, that is pretty good for a woman.' Yeah, I had done a good job. (Fourth year student, female)

Women also told us that they often felt their work was treated as the subject for a joke:

There's more than one. There's another professor in morphology; and another instructor who has me in another class, he walks up, looks at my work, doesn't look at it, says, 'Oh, she really does nice work', like it's a big joke. And I'm ready to shove the Bunsen burner in his face. (Second year student, female)

When the male students are confronted with hard evidence such as posted exam scores that a woman has done well, the women report that they are often given what they call a "hard time":

> *When one of the girls in our class got a good grade, they used to take that sheet and put it in the garbage can and then they'd put a D- or something on the posting sheet. She took one down and said, 'How come I got a D?' The instructor said, 'Well, you didn't get a D.' They did this to her for about three times after she got a A in the class. (Group interview, mixed years, female)*

> *We got to the point where Dr.____ gave us a choice whether we could have our grades posted or not. I went up and told him I didn't want my grades posted because that was it--the guys would go down the line and they'd find which girls did better than them and they'd complain for days that this dumb girl did better than them and they'd be all pushed out of shape. So finally, I didn't even have my grades posted. (Fourth year student, female)*

> *I got to the point where I wouldn't have my grades posted because if I did better than these guys, the babies would just scream and yell all afternoon, and their ego is just something that I just couldn't cope with. I actually had one guy come up to me and--well I'd go home crying. I just couldn't take it last year. (Second year student, female)*

Another story is similar but has more serious repercussions because the response was from a dental lab technician from the town where this woman hopes to practice:

> *I was told by a dental lab tech in the town that I hope to practice in, that, if I sent my work to him and it was perfect, absolutely perfect, because I had the time and I didn't have to be concerned about making money, that he wouldn't do a good job and he'd laugh at my work and he'd tell the other dentists in the community.*

> *There's nothing you can say. Now I'm going to have my own lab in my office. I'm not going to send my work out and have it be ridiculed. (Group interview, mixed years, female)*

Proving oneself to be competent, then, has serious repercussions for women, for it violates taken for granted assumptions about what women are like, Asking and answering questions in class is also a "smart" or unfeminine, aggressive behavior which, the women report, gets them in trouble:

My lab partner let me know that the guys were down on me because I was answering questions in the lecture. I don't answer questions in the lecture any more. I was never trying to show off. I was just doing--the guy asked me a question and I gave him an answer. (Second year student, female)

One of the women students we were told about either didn't get the message from her lab partner or chose to ignore it. Her persistence in talking in class has apparently resulted in her being the source of a standing class joke:

There's one girl in class, who always sits in the front row and is very interested and very dedicated and everything. She asks a lot of questions and she gets involved. She asks good questions and every time she raises her hand, they go 'Oh, Joanne'. They make fun of her all the time.

It's getting to the point now where, when she stood up and yesterday, and said that you were going to be here, they all yelled at her, and hooted and hollered. She said, 'You guys should have more respect', and that just made them go more crazy.

They do it all the time. When anything comes up that th they can do to somebody, a monkey or somebody, they always yell 'Joanne'. They're really immature about it and I think it's because she's so interested and she asks intelligent questions and she does well. But they don't like it. She's doing better than they are. (First year student, female)

Joanne's behavior is apparently considered by the men to be inappropriate. One of the male students stated clearly what he expects women to be like and his irritation when they break the "rules":

You would think a girl might be a little more bashful and kind of standoffish, but a couple of girls in my class are just the opposite. They almost knock you out of the way. And maybe they feel that they can because they are a woman. (Second year student, male)

Another indication that being smart and being feminine is incompatible in dental school was illustrated by the experience of a second year woman student who got good grades. Someone finally told her that if she would make herself look unattractive they wouldn't mind so much:

This one guy, one of the biggest jerks in the whole class came up to me and said 'You bring it all on yourself'. And I said, 'What do you mean'? And he said, 'Well, you always dress so nice and this and that. If you would wear cords and wear your hair in a bun you'd be accepted by the guys.'

I looked at him and said, 'You're the one that's sick. If I have to stereotype my way into being a plain Jane to be accepted by you guys, then you aren't worth being accepted.' I just said, 'Forget it'. (Second year student, female)

The role that feminine attractiveness and attraction play in the treatment of women students is complex. It appears that the more attractive a woman is the more difficult it is for her to prove her competence and seriousness and the more susceptible she may be to accusations that she is using her sex to get ahead:

It seemed like in the first year that some of the women got preferential treatment, especially the cute ones. And they really do get it. And that kind of PO'd a few guys, understandably so. (Second year student, male)

But the men also said they like having attractive women around and they seem to like being attracted to them. Our women respondents reported some serious consequences, though, if they rebuffed an instructor's flirtations:

One particular instructor--when I go to him for instruction, he wants to cuddle up with me and flirt and tell jokes and it takes 15 or 20 minutes to get him to help me, you know, and it's like he doesn't take me seriously. (Group interview, mixed years, female)

I was on a service assignment my junior year and this particular instructor invited me out. I told him I was very sorry but I did not socialize with my instructors. He became rather... he felt rebuffed, became rather indignant.

This year he is the director--I never saw him at that service again--and this year I am rotating the service where he's the head and every time I go to this situation he insults me. (Group interview, mixed years, female)

It is clear from Coomb's 1975 national study of dental students that the incidents we were told about are not isolated or infrequent. Table 34 shows the proportion of first and final year women students who experienced discriminatory incidents, and of those, what percentage were bothered by them. Of the final year women, 93.3% report hearing faculty making disparaging remarks about women in general, and 92.9% were bothered by it. Well over half of the final year women felt faculty had treated their work differently (easier/harder)

TABLE 36

PERCENTAGES OF FIRST YEAR AND FINAL YEAR WOMEN DENTAL STUDENTS WHO REPORT EXPERIENCING DISCRIMINATORY INCIDENTS AND REPORT BEING BOTHERED BY THESE INCIDENTS
N=514

Discriminatory Experiences	Percent Report		Percent Bothered	
	First Year	Final Year	First Year	Final Year
Fellow Students Made Unfavorable Comments About Your Being in Dental School	50.9	69.0	72.0	79.6
Persons Outside of Dental School Made Unfavorable Comments About Your Being in Dental School	61.5	59.2	63.2	90.5
A Faculty Member Seemed Harder on You Than He Was with Men Students	46.5	64.8	91.8	89.1
A Faculty Member Seemed to be Grading you Easier Than He Did Men Students	40.9	56.3	84.7	75.0
Students Made Off-Color Remarks or Played Tricks on You	52.6	68.1	55.7	59.2
A Faculty Member Made Disparaging Remarks About Women in General	63.9	93.3	87.2	92.9
Women Patients were Characterized Negatively	36.6	68.1	78.0	76.6
You Felt at a Disadvantage in Finding Your Own Patients Because of Your Sex	6.4	8.5	76.9	66.6
Your were Unable to Use Dental Fraternities Lab Space for Evening Work Because of Your Sex	6.5	23.4	42.9	40.0
You were Discouraged from Specialty Areas That Others Did Not Consider Suitable for a Woman	15.1	32.4	75.8	78.3
Either at School or on Rotations, There Were Inconveniences or Lack of Appropriate Facilities Such as: Eating Arrangements, Glove-Sizes (Surgical), Gym Facilities, Lockers, Showers, Rest-rooms	42.9	69.0	94.5	89.8

SOURCE: *Coombs, Jeanne A., A Nation-wide Study of Women in U.S. Dental Schools, PhD Dissertation, Harvard School of Public Health, Cambridge, Mass., 1975.*

with the overwhelming majority bothered by it. Another significant source of irritation to women students was the lack of facilities, noted by over two-thirds of the final year women. The negative behavior of male students was reported as "unfavorable comments" by 69% of the final year women and as "off-color remarks or tricks" by 68.1%.

Dealing with Beliefs that Women are too Emotional

Being emotional, concerned, sympathetic, and soft comprise the one cluster of traits ascribed to women that are sometimes viewed positively in terms of professional performance. But expression of these traits is also often seen as "unprofessional". One male administrator we interviewed told a story to demonstrate his belief that dentistry is a perfect field for women because they have what he called a "softer touch":

> *I think it's a good field for a woman. I remember reading something that this one--fellow--his mother had been a dentist--and he goes, 'Every time a man dentist comes at me with those hairy fingers I just get sick, because I'm used to my mother.' It's a more feminine thing and it seems as if a woman has a softer touch. I think it's a perfect field for women. I don't know why they didn't do it sooner. (Administrator, male)*

And another man we spoke to, a clinical faculty member, also talked much about the "soft touch" women have:

> *...And how concerned with the patients she can be, how gentle she is, and by and large the touch of the female is a softer touch than the male, and you can train yourself to have a touch either way, but basically when I shake hands with females, I don't get the painful squeeze I get from some men. You know, we are just made differently in some way. (Clinical faculty, male)*

But another male administrator we interviewed expressed his irritation with what he called the crying syndrome:

> *R* *I don't know if they really have special needs. They have special needs in terms of their emotional behavior sometimes, that I think of as the crying syndrome. We have had a big experience with women crying, and we don't have that with men. I don't know whether this is a female trait or not, but it's hard to overcome.*
>
> *I* *Where are they crying - in classes?*

R *Class--yes, a professor says something to them that you might say to any other individual. Well, even most of the women take it, but they break down and cry. Certain emotional behavior that one wouldn't expect of a professional. I don't know whether it's a need, but it's something that surfaces right away. I think they need--they could use some counseling, because they're still mixed up in their role when they get here. They still see themselves as being female in a male environment and it's hard for them.*

I *That's not a mix-up--that's what they are.*

R *That's what they are, but their reaction to reality is not appropriate. They sort of withdraw a bit. These are just off-the-top-of-my-head observations. I have no facts for it or proof. (Administrator, male)*

Many male students we interviewed expressed amazement that women get "upset" over "one little dirty joke":

> *We treat ours like ladies for the most part. But its amazing how upset they get over one little dirty joke The fact of the matter is that they're in a male dominated profession. (Group interview, mixed years, male)*

Some felt that women sometimes get rattled:

> *Maybe some of them aren't as good emotionally. They have a tendency to get rattled, but again I can only generalize after seeing the people in my class, maybe a couple of different classes. (Second year student,male)*

Many of the men, then, expect the women in dental school to be able to deal with their problems without showing distress or asking favors:

> *Women do all right. There's no reason they wouldn't. Maybe women students with families have much more complicated outside interests that can make it a little harder for them, but if they really want to do it they can. Our three year curriculum is rather trying, and the girls have to go home, maybe to a family of a couple of children and take care of a husband and chores, that's very difficult. Some of them do it. If they can simply solve those problems themselves there's no problem. I enjoy them. (Clinical faculty, male)*

The women we spoke with expressed an understanding of the fact that they are not supposed to show any distress publicly:

Another time something--what I consider a horrible thing--happened at one of my labs. And I really wasn't doing it on purpose but I had had a continually bad week where everything had gone wrong, and this doctor was trying to help me fix up this thing I'd ruined which I thought was unfixable. I sort of started to cry. And I really wasn't doing it on purpose--you know--I had a break. It was Thursday and every day had been rotten and I hadn't slept and he did a 'You're not going to pull that woman stuff on me.' And of course that straightened me up right away because I wasn't trying to pull a, you know--the lady cries to get some kind of sympathy. I was just upset. I couldn't help it. (Group interview, first year, female)

Finally it also appears that women in dental school by definition violate expectations about appropriate roles and behaviors as women, and are often automatically given the negative label of "libber" by male faculty and students. The consequences of this labelling is that it may often be harder to obtain respect from peers and colleagues which might otherwise be accorded as a matter of course.

Oh, I don't know. I don't know if I respect them. My first impression was that 'goddam libber'. All these chicks are libbers. And I don't know. I've come to know them. They're pretty good people. (Third year student, male)

The request that women be feminine, but not cry-babies or libbers leaves a narrow range of behaviors available to them, and often little way of either gaining solace or redress for problems. The women frequently talked about the ways in which they deal with this--usually by themselves:

Because it matters to me how people feel about me. You don't necessarily stay mad about it [how we are treated] *for a long time or anything but you register it and know it bothers you. (Group interview, first year student, female)*

I don't get mad very easily. I think this term it really hit me about how immature these guys are and all the stupid things they were doing and it's going to take me that much longer to do something about it and it might be too late by then. And then I'll probably get mad at myself. (First year student, female)

Sometimes I'll be knitting or crocheting something I won't finish for ten years, but I'll work on it like mad--at midnight. I had no recourse--it's very helpful now to vent my feelings with other women. I'm embarrased to cry in a room with 80 men. There's no place to go with the confusions and guilt feelings--like counselling or a support group. There's little chance to talk with other women--especially if they're not in the same class. (Group interview, mixed years, female)

Dealing with Social Isolation

It is not surprising, given the foregoing discussion, that women students have very few people to whom they can turn for friendship or social relationships. They often expressed the sense of being on their own:

You get an awful lot of criticism thrown at you and very little encouragement. It's harder for a woman to accept criticism. There's terrible, terrible pressure and terribly, terribly negative attitudes. It's very depressing; it takes a lot of faith in yourself. (Fourth year student, female)

I wish I could have a wife too--someone you feel is going through it with you, the way dental wives do; understanding a person under stress. You need to be bolstered, because in school you feel like you're constantly being knocked down. You need a real backup, somebody who is pushing your way. (Second year student, female)

But many women reported that having a relationship with men in their class, even a friendly one, is problematic:

Well, it's really difficult for a single woman. It's difficult for a married woman, because she's got all her marriage responsibilities, too, but there's a difficulty if you're attracted to any of the guys here. It's like incest. I can't say there aren't guys I'm attracted to, here at dental school, and I really made one mistake that caused me a problem. But you go out with these guys--well, one, if they sit anywhere near you, you've got to look at them in the face for three years. I'd rather have a friend than a boyfriend here in school. (Second year student, female)

Many men agreed:

I wouldn't want to damage a friendly relation with them by going out with them. (Group interview, mixed years, male)

Married women, too, reported having trouble finding friends:

> *It's easy for a husband to introduce a wife but not for wives to introduce husbands. My husband can't be comfortable in a large group of dental students and their wives. It is just the way the world is right now. It's difficult socially. (Second year student, female)*

Sometimes other women students can be a source of comfort and support, but there are so few in dental school that it is difficult for women to find a friend there, too:

> *Half of the women students are married, and the other half are too quiet for me. But I've had some great sympathy. There's a girl in my class, she's really nice...One day it was the end of a very bad week. I'd had castings that hadn't come out, somebody had yelled at me in my denture class, and I went into the girl's bathroom and just about felt like banging my head against the wall.*
>
> *A couple of minutes later she came in and was very sympathetic and talked with me and said, 'bad things happen'. So I get some support but there's nobody--there's a girl I know, we play tennis together but there's nobody I can really run around with here. (Third year student, female)*

Many women, however, expressed optimism that more women are entering dentistry and that this will make a substantial difference in improving the training experience for women:

> *Yeah, you do have special problems, but there's not anything that can't be solved. And I think as more women come into the school a lot of these things--these nudie cutie slides--are gonna be stopped because the men are gonna start getting embarassed. When there's only one or two women in the class they can get by with it, but not if half the class is composed of women. I guess it's hard to explain. I feel that the* [women's] *group will be good for the other women in the class, I mean the ones coming up, to have other women to talk to about their problems.*
>
> *Now, I'm not used to this because there's only three of us in the class, and I'm used to either not talking about my things or talking about it to my friends in the class. And the only things I wouldn't talk about was when I had to go cry because I find it very embarassing to be that emotionally upset. To Have to go off and cry about it someplace in the john.*
>
> *That's what's changing. The women in the second year class are very different. They see things very differently. They're sitting here saying what a disgusting, awful place this is. It is so awful. The men are horrendous. Each day I'm offended in some way. Each day somebody slights me. Each day somebody*

is doing some grotesque thing. And they see those things differently because they don't assume that's the way it has to be. And that's what's changing.

Now another thing that's different about the second-year class--the women in there, most of them are younger, and they have the benefit of Women's Lib. I'm older. I didn't grow up with any of that. I felt my own way and so they are more sensitive to all these things than I would be. (Fourth year student, female)

Perhap's women's most encouraging reports were that they are well received by patients (which is not always the case in the other MODVOPPP professions) and look forward to practice.

R^1 *Most of my patients, except for three, are women and they have requested a woman dental student. When I was in pedo the mother wanted me to do all the work, she didn't want a male student to do it. And the male patients I do have really enjoy it. This one guy is 56 and he thinks I'm the greatest thing. I've had 100% acceptance from all my patients, which is really surprising. None of them really hassled me at all.*

R^2 *The thing is many of them like women dental students. They always use the word 'gentle'. They think you're more gentle towards them, not as aggressive with the needle and things like that. And that makes me feel really good, cause sometimes I forget, too, and I say open wider, wider. But they just think a woman dental student is more soft and gentle, takes things more calmly.*

R^3 *I agree. I have pretty good patients and they're all very cooperative, good feedback.*

R^4 *I've had good acceptance. In fact, I think the men love it. I think the most common question they ask is am I going to have male dental assistants. I always say, 'Well, if he has good legs'.*

R^5 *I've felt somewhat surprised by my patients in that most of them who come in might be at first apprehensive about having or even surprised about having a female dentist.. but after about 15 minutes or so it's like, you know, there's no difference between him and me. And Dr.____ and I can attest to it because we work together a lot and quite a few patients have said, 'You know, well I think I prefer a female dentist now.' (Group interview, mixed years, female)*

VI. SUMMARY AND CONCLUSIONS: IMPLICATIONS FOR WOMEN IN DENTISTRY

TRAINING

Schools in General

Of the MODVOPPP schools we visited in this study, the dental schools were among those where women students reported the most frequent and troublesome problems. Some of the issues women raised in their interviews were raised by male students as well and so represent issues of more general significance to the profession. Among the more important of these issues are the following:

- The in-breeding of faculty--apparently a practice at many schools--may have several dysfunctional consequences such as limiting the exchange of theoretical and technical developments within the dental educational community, fostering a sense of protective resistance to changes in the curriculum at their schools, and limiting the potential for recruiting faculty women by concentrating on the small pool of potential recruits represented by a school's own graduates.

  Faculty members in dentistry and in the other MODVOPPP professions as well are rarely trained as educators, and in dentistry nearly two-thirds of all clinical faculty are part-time (65.2%). (9) The combination of these two factors may limit the degree to which faculty are willing to commit time and energy to the development of educational innovation within the training institutions.

- Extreme competition among students is generally regarded by educators, and by the students we interviewed as well, to be a negative factor in the learning environment. In some instances such competition may be exacerbated by such practices as posting examination grades. Similarly, the issue of letter grades or pass/fail grades has merits on both sides, but the appropriate grading system should be considered carefully for those didactic or clinical courses where evaluations must necessarily be subjective and thus imprecise.

- Dental training--particularly clinical instruction--is often highly structured and without opportunity for students to assume the independence, responsibility, and initiative which they feel would better prepare them to assume full professional responsibility for their own work and judgements upon graduation.

- Students frequently expressed the opinion that they receive inadequate training in non-technical areas such as patient relations or community dentistry. Schools are beginning to develop stronger curricula in these areas and should be encouraged to continue.

- Students feel they receive insufficient and superficial training in setting-up and managing a practice. While most will, in fact, learn on the job, the learning can be extremely costly and might be better done more thoroughly in the schools.

Women in Particular

The results of our research in all of the MODVOPPP professions schools suggests that those institutions which provide a supportive learning environment for male students are also the schools where women feel most welcome and report the fewest difficulties. Dental training is difficult, and dental schools are stressful environments for students in general, for women in particular. Since dentistry has traditionally been a male profession, the training institutions reflect the needs of men and the absence of women in their facilities, social and recreational opportunities, support services, pedagogical style, and overall school "atmosphere" or environment. With some notable exceptions, schools often appear indifferent or oblivious to the special needs and requirements of their women students. However, as women students are enrolling in increasing numbers, attention to their needs and presence is needed in dental schools. Summarized below are some of the most immediate and pressing issues which require attention.

- The lack of adequate facilities and equipment for women students (gloves, gowns, bathrooms, and so on) documented by Coombs 1975 study and corroborated by our field respondents is prohibited by Titles VII and VIII of the 1971 Public Health Service Act Amendments and the 1972 Higher Education Act Amendments and must be corrected.

- Equal access to educational opportunities is mandated by federal regulations, and those schools which deny women access to any component of the training process need to review alternatives in which both men and women may equally participate.

- Sex-bias in grading is apparently a problem at some schools or at least among some faculty members at some institutions. Schools must be aware of this practice where it exists and take steps to correct the situation.

- The attitudes that are fostered by dental schools toward women must doubtless affect the professional relationships male dentists will establish with their colleagues once in practice. Resistance to women in the profession and doubt about women's ability and competence could seriously damage women's practitioners' opportunities to establish good professional working relationships with male peers. This would be a particular problem for women choosing to specialize and would thus be dependent on their general practitioner colleagues for referrals.

THE PROFESSION AND PROFESSIONAL PRACTICE

Dentistry is presently faced with a changing health care system and a new set of consumer demands. Certain types of dental services are already being included in some pre-paid health plans, and some form of national program is inevitable. Since dentistry has traditionally focused most of its services on the upper and middle classes, third-party payment plans now are bringing in a whole new population of dental health consumers who previously utilized mainly emergency or restorative services. The profession will have to continue to adapt to new practice modes in new settings to meeting changing needs and patients.

In the past, the profession has been conservative and tightly knit. It is often the training institutions which are the forums and testing grounds for new ideas, but in dentistry the initiative seems to lie with the professional association. Change does not appear to be readily accepted by other levels of the profession. However, since change is inevitable, it is important that the association stay on top of it, keep the initiative, and thereby maintain influence and control especially, for example, in such areas as quality of care and peer review.

One major change which has already occurred is the influx of women into the profession. The profession itself has little control over the attitudes of the individual practitioner, so that any difficulties women encounter in the informal professional and collegial networks will be difficult for the profession to control. Women are not well represented in the local, state, and national associations, and therefore are not often part of the informal referral networks and information exchanges which hold the profession so tightly together. The increasing numbers of women graduates will continue to form gaps in the web of

communication, the unity which makes the profession strong. Unless women are accepted as equal and valued members of the profession, dentistry will lose not only their talents as leaders of the profession, but may lose some internal cohesion as well.

VII. SPECIAL RECOMMENDATIONS

WORK FOR THE ASSOCIATIONS TO DO

The American Dental Association has taken several significant steps to make women more aware of opportunities available to them in the profession. The ADA has developed several recruiting brochures and pamphlets which it makes available to member practitioners and others seeking literature to give to potential applicants wishing information about dentistry. The ADA has prepared a film on women in dentistry, and it participates frequently in career day presentations sponsored by local, state, and national groups such as counsellors' associations, pre-dent clubs, and so on. Activities such as these are important and should be continued. In addition, it would be useful for the ADA to use its communication links to both the schools and practicing dentist to discourage those attitudes which still regard dentistry as a man's profession and women as unwelcome or less than competent new members. In particular, the Council on Dental Education might use its accrediting review function and activities to improve the overall atmosphere women experience at dental schools by alerting school administrators and faculty members to the specific and additional stresses women encounter which are non-productive and dysfunctional to their learning experiences in the schools. The Council might provide technical assistance regarding Titles VII, VIII, and IX requirements and regulations as one means for accomplishing this. Alternatively--or perhaps additionally--continuing education courses for faculty members in educational methods might also be valuable. The Council might also consider supporting and sanctioning student participation in the on-going curriculum review process which is presently conducted by individual schools.

The American Association of Dental Schools' Council of Deans is one of the best organized groups in the profession to consider and suggest appropriate ways in which the schools might attempt to change the school atmosphere for students--an atmosphere which students describe as unnecessarily stressful, rigid, and counter-productive to their professional learning and development. It appeared to us in our field visits that dental school deans were often so necessarily involved with and concerned about broader professional and national health issues that they were unaware of and/or unavailable to provide the leadership required to change some of the practices in the schools which both

men and women students criticized as discouragements and dis-incentives to their full commitment and effort as students. Professional school deans are in a powerful position to set the tone of their institutions through official policies and procedures but also unofficially through their personal behaviors and interactions with other administrators and faculty members. The Council of Deans can be an important organized force within the dental profession to assist member deans to provide the kind of leadership for orderly change which the profession will require in the next several years as more women (and minorities) enter the schools and as the health care delivery system within which dentistry practices undergoes change.

WORK FOR THE SCHOOLS TO DO

With the encouragement and support of the ADA Council on Dental Education, many schools have already begun to institute some of the following steps to increase school responsiveness to student needs. Other suggestions offered here have developed out of our observations at and experiences in other MODVOPPP professions' training institutions.

- Other MODVOPPP professions such as medicine are currently developing and experimenting with more flexible curricula and administration of the educational programs without apparent learning loss. These models should be examined by the dental profession to determine their appropriateness for dental training.

- Some schools presently public and disseminate school policies to students. Student handbooks should be available in all institutions and given to all incoming students. The handbooks should specify student privileges and limitations, health services available, policies regarding grievances and the steps to be taken if a student has a given grievance, and so on.

- Curriculum reviews should, at some point, be opened to all interested students to solicit their views and suggestions. Few students have sufficient free time to attend meetings so a questionnaire might be more effective.

- Faculty retreats, meetings, and/or continuing education courses might usefully include instruction in modern education theory and techniques and perhaps some form of sensitivity training delivered in an appropriate format. Some current teaching practices described by students demoralize students, are not necessary for good

teaching, and may serve to discourage rather than to encourage a student's best efforts.

- Performance objectives (educational goals) should be distributed to students at the beginning of each quarter or semester for each class. These guidelines should be sufficiently clear so that students know what is expected of them and can measure their own progress.

- It is particularly important for all students and for women students in particular that grading practices appear fair and reflective of the quality of work performed. Students we interviewed were particularly critical of arbitrary grading and trick questions on examinations. Alternatives to current practices which schools might consider include pass/fail and random number systems for grading. Pass/fail has proponents and critics, and the wishes of the student body might be considered when assessing whether and in which courses to use pass/fail systems. Random number systems are one way of assuring that personal faculty biases do not interfere with or influence their grading practices. Under a random number system, each student is assigned an identifying number to use on examinations and laboratory work. Numbers are frequently rotated so individual students do not get identified over time.

- Public posting of grades seems in many schools to be a particular problem for women. According to many of our respondents, it tends to trigger criticism, sarcasm, teasing, and other behaviors from male student colleagues which are uncomfortable behaviors for women students. Since grade posting does not appear to contribute positively to the learning experience, we suggest that the practice be an individual student option or discontinued entirely.

- Because women students are so few in dental schools they experience a social and personal isolation which adds to the stress of dental training. Schools might address this problem by encouraging and/or supporting the opportunity for women students from all classes to meet together informally on a periodic basis.

- Schools should assure that women's education, health, and social needs are met, including:

  --assuring an adequate supply of clinic coats and surgical gloves in women's sizes;

  --providing sufficient and accessible women's bathrooms in classroom, laboratory, clinic, and library facilities;

--assuring equal access to recreational facilities, equipment, and programs;

--providing gynecological or family planning services at no extra cost as a normal part of student health services, and providing reasonable rates for maternity services or for health insurance which includes coverage of maternity services.

- Women should not be excluded from any learning opportunities. Off-campus clinic sites which do not welcome women students should be pressured by the schools to do so, or the same learning opportunities should be provided at another clinic site where women may participate.

- Women students and faculty are often exposed to personal danger in schools located in inner city and/or high crime rate areas. Schools should provide evening escort services from school buildings; lighted parking areas; security guards or systems in classroom, laboratory, and library buildings; and so on.

WORK FOR RESEARCHERS TO DO

There is a surprising and impressive amount of research on women in dentistry which is presently being conducted under various auspices including university graduate programs, the federal government, and dental associations. Excellant data on students, much of it by sex, is available from the ADA. The only important information missing on a national basis is studies of trends in women's practice patterns--for example, whether the proportions of women in specialties are changing, whether recent women graduates are more likely to be employees that self-employed, whether self-employed/employee positions affect the ratio of full-time/part-time work. There needs to be serious study in this area since the assumption that "women won't work" and will waste valuable training space is pervasive throughout the school setting, and as a result women are constantly challenged on their right to have access to training. These studies should include information on male dentists for comparative purposes since the full-time work life of male dentists is often abbreviated by early retirement and their extremely low life expectancy.

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APPENDIX A

SUMMARY OF INDIVIDUAL AND GROUP INTERVIEWS NUMBER OF SCHOOLS VISITED, OTHER CONTACTS WITH THE DENTISTRY PROFESSION

A. NUMBER OF SCHOOLS VISITED: Five

B. BREAKDOWN OF INDIVIDUAL INTERVIEWS:

	Male	Female	Total
Administrators			
1. Deans, Presidents, Chancellors	5	--	5
2. Assistant or Associate Deans	13	--	13
3. Affirmative Action Officers	--	3	3
4. Other Administrators	1	4	5
TOTAL	19	7	26
Faculty			
1. Pre-Clinical	5	3	8
2. Clinical	16	5	21
TOTAL	21	8	29
Students			
1. First Year	1	7	8
2. Second Year	5	9	14
3. Third Year	1	--	1
4. Fourth Year	--	2	2
5. Unknown Year-in-school	4	1	5
TOTAL	11	19	30
GRAND TOTAL	51	34	85

C. GROUP INTERVIEWS

Male		Female		Mixed		Total	
# of Groups	Est. Avg. (N=7)	# of Groups	Est. Avg. (N=7)	# of Groups	Est. Avg. (N=8)	# of Groups	Est. Total
1	7	8	56	1	8	10	71

D. OTHER CONTACTS

By telephone: Continued contact was maintained with the American Dental Association and the American Association of Dental Schools

Visits: The American Dental Association, the American Association of Dental Schools Annual Convention, the American Association of Women Dentists, the American Fund for Dental Health, and the American Dental Association, Washington, D.C. Bureau

Letters: The American Dental Association, the American Association of Dental Schools, and the American Association of Women Dentists

APPENDIX B

SUMMARY OF ASSOCIATIONS

The dental profession is considered to be one of the most cohesive, conservative and highly organized in America (30). The two major organizations which represent the dental profession are the American Dental Association (ADA) and the American Association of Dental Schools (AADS). The ADA, AADS and the American Dental Trade Association jointly sponsor the independent organization, the American Fund for Dental Health (AFDH), which sponsors dental research and maintains a scholarship fund for dental students.

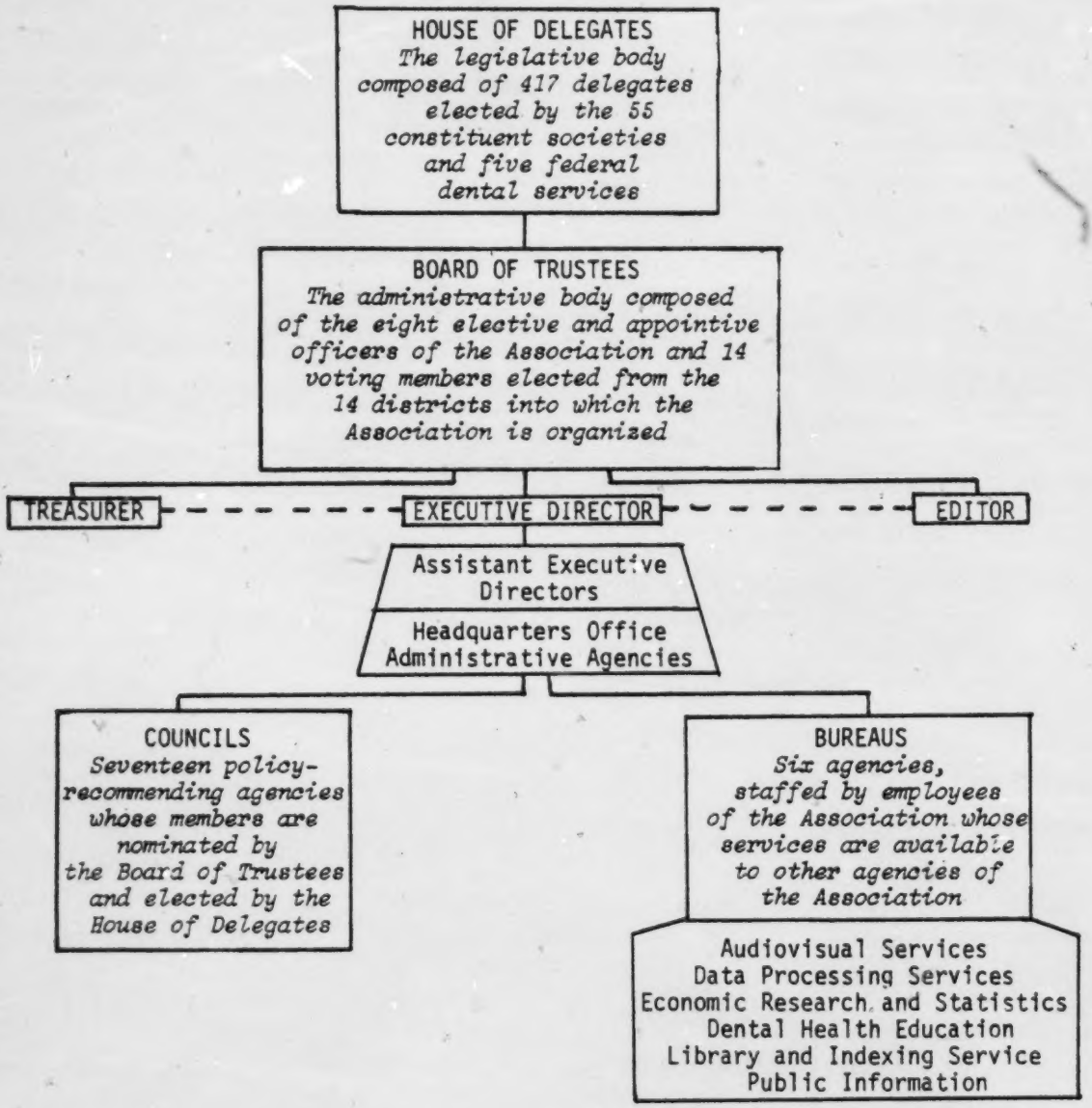
Other major associations of dentists include organizations based on the eight recognized dental specialties, several aspiring specialties, the American College of Dentists, the National Dental Association of Negro Dentists, the Association of American Women Dentists (AAWD), and dental fraternity associations. Informal groups within local dental communities have a long history in American dentistry. These "study clubs" serve the functions of continuing education and provide the framework of the collegial network. An example of the extensive network of dental associations (formal and informal) is one study of Minnesota dentists which compiled a list of 150 such organizations in a state with a dentist population of about 2,200 practitioners.

Organization and Functions of the ADA

The organization of the ADA is similar to that of the American Medical Association. There are approximately 473 component (local) groups and 55 constituent (state and dependencies) societies (30). It is estimated that 72.8% of American dentists are active members of the ADA and an additional 8.7% are life members (81.5% overall). (8) In addition, there were 15,335 student members as of 1969. (8)

The ADA headquarters is located in Chicago, and there is a small branch office in Washington, D.C. The headquarters has over 350 employees. The organizational chart below illustrates the basic structure of the ADA.

ORGANIZATIONAL CHART OF THE
AMERICAN DENTAL ASSOCIATION


HOUSE OF DELEGATES
The legislative body composed of 417 delegates elected by the 55 constituent societies and five federal dental services
BOARD OF TRUSTEES
The administrative body composed of the eight elective and appointive officers of the Association and 14 voting members elected from the 14 districts into which the Association is organized
TREASURER
EXECUTIVE DIRECTOR
EDITOR
Assistant Executive Directors
Headquarters Office Administrative Agencies
COUNCILS
Seventeen policy-recommending agencies whose members are nominated by the Board of Trustees and elected by the House of Delegates
BUREAUS
Six agencies, staffed by employees of the Association whose services are available to other agencies of the Association
Audiovisual Services
Data Processing Services
Economic Research and Statistics
Dental Health Education
Library and Indexing Service
Public Information

Source: *The American Dental Association, Its Structure and Function* ADA, Chicago, Ill., 1969, p. 11.

The American Dental Association has established the following councils:

- Dental Care Programs
- Dental Education
- Dental Health
- Dental Laboratory Relations
- Dental Materials and Devices
- Dental Research
- Dental Therapeutics
- Federal Dental Services
- Hospital Dental Service
- Insurance
- International Relations
- Journalism
- Judicial Council
- Legislation
- National Board of Dental Examiners
- Relief
- Scientific Session

The Council of Dental Education has responsibility for the quality of dental training. The ADA nominates three of the Council's nine members. Three more are nominated by the AADS and the remaining three by the American Association of Dental Examiners. Members are elected by the House of Delegates.

The major areas of Council responsibilities are:

- To administer an accreditation program for educational institutions conducting programs in dental education, advanced specialty training, dental hygiene, dental assisting, and dental laboratory technology.
- To recommend and administer basic requirements to be used by national certifying boards in special areas of practice in establishing standards for certification of specialists in dental practice.

- To recommend and administer basic requirements to be used in the approval of dental internship and residency programs and other advanced education programs, and to recommend ways and means through which dentists may be given continuing opportunities for advanced study.
- To facilitate coordination of efforts of the dental schools, state dental examining boards and dental societies in maintaining high professional standards.
- To acquaint the nation's youth with advantages of dentistry as a career.
- To develop and maintain a program of aptitude testing as an aid in the selection of dental students.
- To compile and issue reports and studies on all matters relating to dental education. (6)

In the American Council of Education (ACE) report of 1960, it was observed that the Council on Dental Education had been overloaded with other duties, to the neglect of its accrediting function. The ACE report noted that some schools had not been visited for 18 years, although a "crash" program begun in 1960 had caught up most of the backlog. Present accrediting standards require that schools maintain ongoing curriculum review committees, and the schools must be visited by teams from the Council on Education every three years.

Council Activities which have particular interest for us are the development and administration of the Dental Aptitude Test (DAT) and the recruitment efforts. The Council also publishes a comprehensive Annual Report on Dental Education.

The Editor's Office of the ADA publishes the following:

- Journal of the American Dental Assocation (monthly)
- Dental Abstracts (monthly)
- Journal of Oral Surgery (bi-monthly)
- Oral Research Abstracts (monthly)
- Journal of Dental Research (bi-monthly)
- ADA News.

Structure and Function of the American Association of Dental Schools (AADS)

The AADS membership includes all dental training institutions, plus about 2000 individual members (about 300 of these are students). The AADS central office moved to Washington, D.C. in 1972, but the Office of Educational Resources and Studies remains in Chicago and has responsibility for liaison with the ADA. The organizational chart below makes it clear that many AADS interests overlap with ADA functions, and the ADA and AADS share some functions such as nominations for membership on the ADA Council on Education.

The AADS publishes, among other things, a recruitment brochure and a booklet on admission requirements. Other important publications include:

- Journal of Dental Education (monthly)
- Bulletin of Dental Education (monthly)
- Dental Student News (student-edited, bi-monthly)
- AADS Washington Report (distributed to deans and directors of post-doctoral programs).

American Association of Women Dentists

The AAWD central office is in Chicago. Membership currently stands at about 335. The AAWD maintains liaison with the ADA and has responsibility for managing the Gillette Hayden Memorial Foundation (headquarters in Atlanta) which makes loans of $1,000 - $1,500 per year to women dental students who are in their third or fourth years of training. Women students seldom mention contact with the AAWD although student memberships are available.

American Fund for Dental Health

The American Fund for Dental Health (AFDH), formerly the American Fund for Dental Education (AFDE) is an independent organization sponsored by the ADA, AADS, and the American Dental Trade association. Its primary purposes are fund raising, support to dental research, assistance to dental schools, and maintenance of a scholarship and loan fund for needy dental students. Current student aid includes:

- Dental Student Loan Program: $3,000 per year, maximum $12,000 for four years
- Scholarships for undergraduate disadvantaged minority students seeking dental careers: $2,500 per year, maximum $12,500 for five years (one year pre-dental and four years of dental school)

ORGANIZATIONAL CHART OF THE
AMERICAN ASSOCIATION OF DENTAL SCHOOLS

HOUSE OF DELEGATES
Executive Committee plus some or all members of AADS councils

EXECUTIVE COMMITTEE
12 members: President, Pres.-Elect, Immediate Past Presidents; Eight Vice-Presidents (elected by councils); Secretary-Treasurer (ex-officio, appointed by Executive Committee)

COUNCILS
Administrative Boards for each Council are: Vice-President, Chairman, Chairman-Elect Secretary and Member-at-Large

- Advanced Education
- Auxilliaries
- Deans
- Faculties
- Federal Dental Services
- Hospitals
- Sections
- Students

SECTIONS
AADS Members may choose membership in in up to three sections

- Anatomical Sciences
- Biochemistry and Nutrition
- Biomaterials
- Clinic Administration
- Communication, Development and Public Affairs
- Community and Preventive Dentistry
- Continuing Education
- Dental Anatomy and Occlusion
- Dental Assisting Education
- Dental Hygiene Education
- Dental Laboratory Technology Education
- Dental School Admission Officers
- Dental School Finance Officers
- Endodontics
- Fixed Prosthodontics
- Graduate and Postgraduate Education
- Learning Resources
- Microbiology
- Operative Dentistry
- Oral Diagnosis and Oral Medicine
- Oral Radiology
- Oral Surgery, Anesthesia, and Hospital Dental Service
- Orthodontics
- Pathology
- Pedodontics
- Periodontics
- Pharmacology and Therapeutics
- Physiology
- Practice Administration
- Removable Prosthodontics

Source: Adapted from the American Association of Dental Schools, "An Invitation to Individual and Student Membership," AADS, Chicago, Ill., No date

APPENDIX C

CHRONOLOGY OF KEY EVENTS IN THE DEVELOPMENT OF DENTISTRY AS A HEALTH PROFESSION

1839 American Journal of Dental Science, first American dental journal, begins publication

1840 The Baltimore College of Dental Surgery, first dental school, founded.

1859 American Dental Association founded.

1965 First DDS degree awarded to a woman, Lucy Hobbs

1868 First State Practive Acts passed by legislatures in Alabama, Kentucky, Ohio and New York

1893 Emeline Jones enrolled as a lawfully registered dentist in Connecticut.

1906 Dental Education Council of America established (succeeded in 1937 by the ADA Council on Dental Education)

1921 Federation of American Women Dentists, later the American Association on Women Dentists (AAWD) founded.

1921 Gies Study of Dental Education conducted.

1923 American Association of Dental Schools founded.

1926 Gies Study Report published.

APPENDIX D

LIST OF SCHOOLS

STATE	DENTAL SCHOOL	TYPE OF INSTITUTIONAL SUPPORT	TYPE OF DEGREE GRANTED
ALABAMA	University of Alabama	Public	D.M.D.
CALIFORNIA	University of the Pacific	Private	D.D.S.
	University of California	Public	D.D.S.
	University of California at Los Angeles	Public	D.D.S.
	University of Southern California	Private	D.D.S.
	Loma Linda University	Private	D.D.S.
COLORADO	*University of Colorado	Public	D.D.S.
CONNECTICUT	University of Connecticut	Public	D.M.D.
DISTRICT OF COLUMBIA	Georgetown University	Private	D.D.S.
	Howard University	Private	D.D.S.
FLORIDA	*University of Florida	Public	D.M.D.
GEORGIA	Emory University	Private	D.D.S.
	Medical College of Georgia	Public	D.M.D.
ILLINOIS	Loyola University	+P.S.R.	D.D.S.
	Northwestern University	+P.S.R.	D.D.S.
	*Southern Illinois University	Public	D.M.D.
	University of Illinois	Public	D.D.S.
INDIANA	Indiana University	Public	D.D.S.
IOWA	University of Iowa	Public	D.D.S.
KENTUCKY	University of Kentucky	Public	D.M.D.
	University of Louisville	Public	D.M.D.
LOUISIANA	Louisiana State University	Public	D.D.S.
MARYLAND	University of Maryland	Public	D.D.S.
MASSACHUSETTS	Harvard School of Dental Medicine	Private	D.M.D.
	*Boston University	Private	D.M.D.
	Tufts University	Private	D.M.D.
MICHIGAN	University of Detroit	+P.S.R.	D.D.S.
	University of Michigan	Public	D.D.S.
MINNESOTA	University of Minnesota	Public	D.D.S.
MISSOURI	University of Missouri at Kansas City	Public	D.D.S.
	Washington University	Private	D.D.S.
NEBRASKA	Creighton University	Private	D.D.S.
	University of Nebraska	Public	D.D.S.

STATE	DENTAL SCHOOL	TYPE OF INSTITUTIONAL SUPPORT	TYPE OF DEGREE GRANTED
NEW JERSEY	Fairleigh Dickinson University	Private	D.M.D.
	New Jersey Dental School	Public	D.M.D.
NEW YORK	Columbia University	Private	D.D.S.
	New York University	Private	D.D.S.
	*State University of New York at Stony Brook	Public	D.D.S.
	State University of New York at Buffalo	Public	D.D.S.
NORTH CAROLINA	University of North Carolina	Public	D.D.S.
OHIO	Ohio State University	Public	D.D.S.
	Case Western Reserve University	+P.S.R.	D.D.S.
OKLAHOMA	*University of Oklahoma	Public	D.D.S.
PENNSYLVANIA	Temple University	+P.S.R.	D.D.S.
	University of Pennsylvania	Private	D.M.D.
	University of Pittsburgh	+P.S.R.	D.M.D.
SOUTH CAROLINA	Medical University of South Carolina	Public	D.M.D.
TENNESSEE	Meharry Medical College	Private	D.D.S.
	University of Tennessee	Public	D.D.S.
TEXAS	Baylor College of Dentistry	+P.S.R.	D.D.S.
	*University of Texas at Houston	Public	D.D.S.
	University of Texas at San Antonio	Public	D.D.S.
VIRGINIA	Virginia Commonwealth University	Public	D.D.S.
WASHINGTON	University of Washington	Public	D.D.S.
WEST VIRGINIA	West Virginia University	Public	D.D.S.
PUERTO RICO	University of Puerto Rico	Public	D.M.D.

* Not fully operational as of 1974-75, but has admitted at least one class
\+ Private-State-Related

APPENDIX E

SUMMARY OF STUDENT GROUP INTERVIEW ISSUES REGARDING PROFESSIONAL TRAINING

INTRODUCTION

URSA used two primary techniques for interviewing students about their professional training experiences in general and about the problems they encounter in gaining access to and pursuing professional training in particular. Each produced a different set of issues and different emphases.

URSA adapted a planning technique known as the Delbecq Nominal Group Process into a form of group interview which we used to surface from groups of students a broad spectrum of problems and issues they encounter in professional training. The groups were small--typically numbering less than twelve--and they included all female groups, mixed male/female groups, and all male groups. The group interviews gave us insights into which of the problems most group members shared, which seemed to present the greatest obstacles in professional training, and which are controversial.

URSA also conducted a series of individual one-on-one interviews with male and female students. The individual interviews often touched on problems and issues not raised in the group interviews because they might be considered "too personal", because they needed direct probes and encouragement to surface, because they were not shared by other members in the group, or because they were not directly related to the question the group was asked to address.

The list of problems included in this Appendix and the analysis which precedes it represent only those issues raised in group interviews by students in response to a single question posited them by the URSA field team. The list does not include any additional issues--and there were many--which surfaced in individual interviews.

As the study progressed, URSA used several questions in the group interviews, changing them to allow us to probe or follow new areas of concern. As most were non-productive (see VOLUME I on Methodology), this Appendix includes only responses to the question: "Given your experiences and observations, what problems does a woman encounter in becoming an X (doctor, dentist, etc.)?" for women, "Given your experiences and observations, what problems does a person encounter becoming an X?" for mixed groups, and " ..what problems does a man encounter in becoming an X?" for the men.

Group members were given approximately ten minutes to write their responses to the question on a card, and the answers were recorded without discussion on easel pads so that all members of the group could see the responses. The list of problem categories included and discussed below was generated from the responses on these cards and on the easel pads. In most cases different issues were raised by men and women, but in all cases where the problem category was shared, it was discussed in different contexts, with different emphases, and in terms of a differential impact on men and women.

Generally the problems mentioned clustered into six categories: structural features of the school(s), profession(s), or sex roles; absence or inadequacy of programs, services, facilities, or equipment provided by the training institutions; problems with characteristics of the profession and its work; access to resources required to consider the profession, be admitted to school, and to participate fully in professional practice; negative attitudes and behaviors of peers, faculty, practitioners, and clients; and the impact on oneself of all of the above.

STRUCTURAL FEATURES OF THE SCHOOL(S), PROFESSION(S), OR SEX ROLES

This category includes all those structural features of the profession or school that affect women's experiences in training as well as structural consequences of societal sex roles which reflect the society's assumptions about appropriate roles for men and for women. By appropriate roles we mean those behaviors, feelings, attitudes, skills, attributes, characteristics, and motivations we usually associate with one sex to a greater extent and/or more often than with the other. Structurally, for women, this refers to the specific sets of responsibilities delegated to them by the society on the basis of their gender. Issues raised by women students in this category include:

Lack of Role Models

Basically this is an issue of how many and where women faculty appear in the schools. At some schools the problem is that there are no women faculty or clinicians at all to whom female students can look for evidence that a woman "can do it." In other schools, women appear only in what students consider the lesser status positions (e.g., Basic Science Instructors) which women students feel is a statement about a woman's proper role within the profession. At the few schools in which women clinicians appear in high level positions, some female students may reject them as unacceptable role models because the women have not managed to balance professional success in filling other feminine roles.

Lack of a Support Group of Women

Women students hope and sometimes expect that support from other women will help offset the social and professional isolation they feel in the male environment of the professional schools. The lack of such support is a severe disappointment and often aggravates the pressures of loneliness and isolation. This is a direct result of few numbers of women in a class or school and is compounded by differences in age and marital status.

Being Tracked into a Limited Range of Specialties or Practice Opportunities

This problem has two aspects. Certain specialties and practice options in each of the professions are labeled as more or less appropriate for women. To some degree these labels are consistent with commonly held stereotypes regarding women in this society. For example, the specialties involving work with children are all considered appropriate for women. Similarly, regarding practice options, those that involve supervising a staff and running a business are generally regarded inappropriate for women. For most women in making the decision regarding specialty selection or practice choice, the stereotypes and pressures to go into one rather than another

selection are important. More important, though, are those problems arising from the necessities in a woman's life of carrying responsibility for both a family and a profession. This consideration, and at times necessity, works to track women into those specialties or practice options that are most easily controlled in terms of numbers of hours worked.

Balancing Work/Family

The years of professional training coincide in our society with a woman's childbearing years. To the extent that women are primarily responsible for the home and children, the problems of time management, energy commitment and sheer logistics in being a full-time student and committed practitioner and wife/mother at the same time create a tremendous pressure and problem for women that men do not experience. This is the single most widespread, cross-professional issue of which women spoke. If the women were not already in the position of managing both wife/mother and professional (student) roles, they anticipated that they would in the future.

Women at a Disadvantage Due to Background or Physical Ability

In some professions women feel that they have a distinct disability or handicap due to their background and socialization as women or due to physical size. In dentistry, for example, a familiarity with tool use and terminology is important and often assumed by the schools. Many women spoke of the problems they encountered in picking up such skills and information that the schools assumed they had but didn't (and that many male students did, in fact, have). In other professions where physical size and strength are important, women spoke of the difficulties and inequities in trying to learn techniques that were developed for the male physique.

Social Problems: Fear of the Impossibility of Finding a Mate

Women in all the MODVOPPP professions speak of some problems with dating men who do not understand, support, or accept their choice of a male profession. In medicine women speak of the fear of never finding a male who could accept their high status, high pay, and strong professional commitment. This problem is uniquely women's because it is an accepted pattern in our society for men to marry women who have less social status and less earning power than they. For women in professions with top status and pay, the range of men for whom they make appropriate matches tends to be limited to the men within the profession who might be more successful than they.

ABSENCE OR INADEQUACY OF PROGRAMS, SERVICES, FACILITIES, EQUIPMENT AND OTHER SUPPORTS OR RESOURCES

When schools fail to provide, or provide inadequate, resources in the learning environment and training program, difficulties are caused for women. This becomes an issue when their special or equal needs are not met by the physical plant. For example, when uniforms, lab coats, surgical gowns, etc., are not available in women's sizes women have to wear things too big for them or dress in the uniforms of other health professionals (such as clerks in pharmacies, nurses in surgery). Changing rooms, lounges, women's toilets, and on-call sleeping facilities are often not as available and accessible to women as to men. Health care services or insurance often do not

cover gynecological and family planning services. Child care is not available. Escort services are not available for women working late in labs, clinics, or libraries.

CHARACTERISTICS OF THE PROFESSION AND ITS WORK

Issues in this category were only mentioned by male students. The category includes features of the work or of the profession which create a pressure on the student and on the practitioner. For example, the life or death responsibility of a physician is felt heavily by medical (both MD and DO) students who feel a special necessity for learning everything possible while in training, for developing emotional means of dealing with that responsibility, and for demanding a more than full-time dedication and commitment from themselves and their peers. An issue more widespread among the MODVOPPP professions has to do with the relative status of a profession vis-à-vis the medical profession. Particularly in the lesser known professions that are struggling with the medical profession for recognition and control over practice rights, the lower status is seen by male students to be a large obstacle to public acceptance.

ABSENCE OF OR DIFFICULTY IN GAINING ACCESS TO RESOURCES REQUIRED TO CONSIDER PROFESSION, BE ADMITTED TO SCHOOLS, OR ESTABLISH FULL PROFESSIONAL PRACTICE

Lack of Encouragement and/or Information

Given the rigors of training and the added pressures for women in a male profession, institutional and informal supports are vital. Women feel a lack of encouragement and support and at times experience direct discouragement. Particularly in the decision to pursue a profession the amount and extent of information and encouragement given women is vital. Although men spoke of a lack of information as an issue for them in the lesser known MODVOPPP professions, it is even more difficult for women. A related issue is access to information passed along informal networks that do not include women--e.g., fraternities, golfing partners, etc., giving helpful hints or suggestions for "how to get what you want" peculiar to the profession.

Access to the Profession's Informal Network of Practitioners

Women experience problems in this area both in training and when trying to obtain access to internships, residencies, or jobs. While in training, women report they are left out of the informal male network in which information is exchanged, support given, and friendships formed. These settings include fraternities, men's changing rooms, golf, and other athletic teams. Women worry that this will result in being left outside the referral and job network when they become practitioners. All students, male and female, worry about getting jobs, internships, and residencies. Women devote much of their energy in this regard to figuring out how to deal with the well-documented and well-known prejudices against women held by practitioners. This increases the pressure on women to "prove" themselves, reinforces the feeling that they aren't welcome in the profession, and most importantly, represents a real obstacle to women in getting through training and into professional practice. Jobs passed from fraternity brother to fraternity

brother, practitioners relying on informal recommendations from their friends regarding which applicants to accept to their practice, and prejudices about the abilities and competencies of women all result in important limits on women's access to these positions.

Absence of Appropriate Personal Characteristics and Attributes Required of Students, Practitioners

This problem was expressed in resentments and statements made by male students in their group interviews and by women in terms of the main stereotypes which the women feel are used to challenge their presence in the schools and in the professions. Frequently mentioned stereotypes include: "women are too emotional", "women are only accepted because they are women", "women are less dedicated", "women are only here to prove something", "women are not good at analytical thinking", "women are too indecisive to be good managers".

Absence of, Concern about Ability to Meet Formal Requirements of Students, Practitioners

This category of issues was mentioned only by men in most professions. It was expressed as concern about passing courses, passing the National Licensing Boards, etc.

Access to Financing

The financial burden of training is felt by both male and female students, but it is expressed to a different degree and in different contexts. For women it is harder to earn money before and while in training. The jobs available to women often pay less money, and in some professions where jobs are available to the untrained (e.g., veterinary clinic assistant), women are not given the jobs. While in training women report they believe it is more difficult for women to get adequate loans. Parents are often less willing to support a woman than a man through expensive and long training. Spouses are less often available as a source of support for women.

NEGATIVE ATTITUDES AND BEHAVIORS OF OTHERS

This category includes the constellation of attitudes, reactions, and behaviors which women face daily in the training environment.

Incidents of Sexism in the School

We heard many and various reports of jokes at the expense of women--e.g., denigrating comments, nudie slides in lectures, actions or comments aimed at embarassing or "putting down" women, intentional or unintentional use of language in such a way as to ignore or put down women. The majority of these incidents were performed by male peers or male faculty.

Resentments by Male Peers

This resentment is primarily expressed by male students in regard to competitive situations in the profession. For example, it includes resentments that women in school are taking a man's place, that women getting jobs means less for men. It also includes beliefs that women get special treatment by admissions committees, faculty members, and clinicians. Another source of resentment from male peers regards the amount of sexuality that is regarded

as appropriate in women. At some schools males express disapproval of the women for stepping outside the boundaries of a traditional woman's role, thus in some way challenging their own assumptions about and ways of dealing with women.

Client Prejudices

This category includes both real and anticipated problems with patient disbelief, distrust, and sometimes refusal to be treated by a female practitioner. The result of these prejudices is that while in training women may be denied important learning opportunities, while in practice it may be more difficult for them to get patients, and in all cases they must anticipate the necessity of proving their competence.

The Prejudices of Staff and Employees in Clinic Settings

In the professions that include a business or managerial component, prejudices and unwillingness of employees and staff to be supervised by a woman is particularly difficult. In all the professions, respect and acceptance as a professional by other health workers is essential. Women report that respect and acceptance are denied them because of their gender.

THE IMPACT ON ONESELF OF STRUCTURAL FEATURES, THE ATTITUDES, AND BEHAVIORS OF OTHERS, OF THE TRAINING PROCESS ITSELF

All of the above listed problems mentioned by women have some impact on their own feelings about themselves and their profession, on the choices they make, and on their behaviors.

Women's Double Binds

This category was variously described by women as "walking a very thin line", "damned if you do, damned if you don't", and "you can't win as a woman and as a professional." Standards of professional behavior conflict with standards of feminine behavior and women are caught in the middle, particularly in situations requiring aggressiveness, decisiveness, or managing others.

Women's Feeling That They Must Work Harder to Prove Themselves

The combined pressures and impact on women of stereotypes that challenge women's abilities, competencies and commitments result in women reporting the following kinds of problems: women fear making mistakes or taking risks; they fear speaking up or asking questions that might be considered stupid; they feel they have to work twice as hard to be recognized by faculty; women feel reluctant or unable to ask for any special support or help out of fear that the request would reinforce negative stereotypes about women.

Problems with Maintaining Relationships/Other Interests

This has most to do with the emotional strain, academic time pressures, and isolation of being a health profession student. Both male and female students feel cut off from friends not in training with them, and they experience problems in finding energy to devote to significant relationships and in lack of time to spend on other interests. While these problems were mentioned with equal emphasis by both men and women, for women the problems of isolation and being cut off from people outside of the training experience increases the difficulties they experience of being isolated within the training environment, too.

Competition and Academic Pressures

Only male students have expressed this as a concern in each profession, and it appears to be a central problem for them.

Feeling You Must Turn Off Your Emotions

Although related to double binds for women where expressing emotion is considered inappropriate as professional behavior, this is a specific issue that was raised by both men and women. Professional conduct and the pressures of dealing with many cases in a small amount of time demands a certain distancing on the part of the practitioner. Women and some men take issue with these demands because they feel it cuts off a part of them that is (and in their minds, should be) a part of their medical involvement.

Concern That The Training Process "Changes Who You Are"

Again, a concern shared by male and female students, this relates to all the ways in which they feel the professionalization process demands conformity to a single model of professional conduct and attributes.

Three Summary Checklists of Group Interview Issues follow. The first compares women's concerns among the eight MODVOPPP health professions included in this study; the second compares men's. The third compares men's and women's responses in this profession only.

SUMMARY CHECKLIST OF FEMALE GROUP INTERVIEW ISSUES
COMPARATIVE MODVOPPP PROFESSIONS

	M	O	D	V	O	P	P.	P
STRUCTURAL FEATURES								
Lack of Role Models	•	•				•		•
Lack of Support Group of Women		•				•		•
Tracked into Limited Specialties/Options	•	•	•	•		•	•	
Balancing Work/Family	•	•	•	•	•	•	•	
Women's Disadvantage in Background or Size		•	•	•				
Social Problems	•							
ABSENCE OR INADEQUACY OF FACILITIES	•	•	•	•		•		
CHARACTERISTICS OF THE PROFESSION AND ITS WORK								
Life and Death Responsibility								
Relative Status of the Profession					•			•
ABSENCE OF OR DIFFICULTY IN GAINING ACCESS TO RESOURCES								
Lack of Encouragement and/or Information	•	•	•	•	•		•	•
Access to the Informal Network	•	•	•		•	•	•	•
Absence of Required Personal Attributes	•	•	•	•	•	•	•	•
Absence or Concern about Meeting Formal Requirements			•			•	•	
Access to Financing	•	•	•	•	•	•	•	
NEGATIVE ATTITUDES/BEHAVIORS OF OTHERS								
Incidents of Sexism	•	•	•	•	•	•	•	•
Resentment by Male Peers	•	•	•	•	•	•	•	
Client Prejudices	•	•	•	•	•	•	•	
Staff/Employee Prejudices	•		•			•	•	•
IMPACT ON SELF OF TRAINING								
Double Binds	•	•	•	•		•	•	•
Women Feel Must Work Harder	•	•	•	•	•	•	•	•
Problems with Maintaining Relationships	•	•	•	•		•		
Competition and Academic Pressures								
Feeling You Must Turn off Emotions	•	•	•					•
Concern That the Training Process Changes You	•							

SUMMARY CHECKLIST OF MALE GROUP INTERVIEW ISSUES
COMPARATIVE MODVOPPP PROFESSIONS

	M	O	D	V	O	P	P	P
STRUCTURAL FEATURES								
Lack of Role Models								
Lack of Support Group of Women								
Tracked into Limited Specialties/Options								
Balancing Work/Family								
Women's Disadvantage in Background or Size								
Social Problems								
ABSENCE OR INADEQUACY OF FACILITIES								
CHARACTERISTICS OF THE PROFESSION AND ITS WORK								
Life and Death Responsibility	•	•						
Relative Status of the Profession		•	•		•	•	•	•
ABSENCE OF OR DIFFICULTY IN GAINING ACCESS TO RESOURCES								
Lack of Encouragement and/or Information								•
Access to the Informal Network								
Absence of Required Personal Attributes								
Absence or Concern about Meeting Formal Requirements		•	•		•	•	•	•
Access to Financing	•	•	•	•		•	•	
NEGATIVE ATTITUDES/BEHAVIORS OF OTHERS								
Incidents of Sexism								
Resentment by Male Peers								
Client Prejudices								
Staff/Employee Prejudices								
IMPACT ON SELF OF TRAINING								
Double Binds								
Women Feel Must Work Harder								
Problems with Maintaining Relationships	•	•		•		•		
Competition and Academic Pressures	•	•	•	•		•	•	•
Feeling You Must Turn off Emotions								
Concern That the Training Process Changes You	•	•						

SUMMARY CHECKLIST OF GROUP INTERVIEW

DENTISTRY

	WOMEN	MEN
STRUCTURAL FEATURES		
Lack of Role Models		
Lack of Support Group of Women		
Tracked into Limited Specialties/Options	•	
Balancing Work/Family	•	
Women's Disadvantage in Background or Size	•	
Social Problems		
ABSENCE OR INADEQUACY OF FACILITIES	•	
CHARACTERISTICS OF THE PROFESSION AND ITS WORK		
Life and Death Responsibility		
Relative Status of the Profession		•
ABSENCE OF OR DIFFICULTY IN GAINING ACCESS TO RESOURCES		
Lack of Encouragement and/or Information	•	
Access to the Informal Network	•	
Absence of Required Personal Attributes	•	
Absence or Concern about Meeting Formal Requirements	•	o
Access to Financing	•	o
NEGATIVE ATTITUDES/BEHAVIORS OF OTHERS		
Incidents of Sexism	•	
Resentment by Male Peers	•	
Client Prejudices	•	
Staff/Employee Prejudices	•	
IMPACT ON SELF OF TRAINING		
Double Binds	•	
Women Feel Must Work Harder	•	
Problems with Maintaining Relationships	•	
Competition and Academic Pressures		o
Feeling you must Turn off Emotions	•	
Concern that the Training Process Changes You		

APPENDIX F

SUMMARIES OF CHARACTERISTICS OF SCHOOLS AND INTERVIEW RESPONDENTS IN EIGHT MODVOPPP PROFESSIONS

SCHOOL VISIT SITE SELECTION BY CHARACTERISTICS

	# of Field Sites	Urban	Rural	North Central (1)	South	Northeast	West	Public	Private	Free-Standing	Univ. Affiliate	Physically Indep.	Medical Center	Part of Campus	High Status (2)	Low Status (2)	High % Women Enrolled (3)	Low % Women Enrolled (3)
Medicine	9	8	1	1	3	2	3	5	4	1	8	1	2	6	6	3	7	2
Osteo. Med. (4)	2	-	-	-	-	-	-	-	-	-	-	-	-	-	N/A	N/A	1	1
Dentistry	5	5	Ø	Ø	2	1	2	3	2	Ø	5	1	2	2	2	3	4	1
Vet. Med.	2	1	1	1	Ø	Ø	1	2	Ø	Ø	2	Ø	Ø	2	N/A	N/A	1	1
Optometry	2	2	Ø	Ø	Ø	1	1	1	1	1	1	1	Ø	1	1	1	1	1
Podiatry (4)	2	-	-	-	-	-	-	-	-	-	-	-	-	-	N/A	N/A	2	Ø
Pharmacy	3	3	Ø	Ø	Ø	1	2	1	2	1	2	1	1	1	1	2	2	1
Pub. Hlth.	2	2	Ø	Ø	1	Ø	1	1	1	Ø	2	1	Ø	1	2	Ø	2	Ø
TOTAL	27	21	2	2	6	5	10	13	10	3	20	5	5	13	N/A	N/A	20	7

(1) The four regions are comprised of the following states:

North Central: Illinois, Indiana, Iowa, Michigan, Minnesota, Missouri, Ohio, Idaho, Wisconsin, Kansas, Montana, Nebraska, North Dakota, South Dakota, Utah, Wyoming.

South: District of Columbia, Maryland, West Virginia, Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, Virginia.

Northeast: Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont, Delaware, New Jersey, New York, Pennsylvania.

West: Arizona, New Mexico, Oklahoma, Texas, Colorado, Alaska, California, Hawaii, Nevada, Oregon, Washington

(2) Where known or applicable, status is defined as the degree of respect accorded a given institution by members of the same profession.

(3) Higher or lower than the national proportion of women enrolled by profession.

(4) This information has been intentionally omitted since the combination of characteristics might identify which schools were visited. Thus totals for site characteristics do not add to 27.

SUMMARY OF INDIVIDUAL INTERVIEWS

		Administrator Interviews															Faculty Interviews								
	# of Schools	Deans, Presidents, Chancellors			Asst. or Assoc. Deans			Affirmative Action (1)			Other Admin. (2)			Total Admin.			Pre-Clinical Faculty			Clinical Faculty			Total Faculty		
		M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
Medicine	9	10	--	10	11	5	16	--	5(1)	5(1)	11	15	26	32	25	57	8	13	21	19	21	40	27	34	61
Osteo. Med.	2	3	--	3	4	--	4	--	--	--	4	1	5	11	1	12	5	--	5	4	6	10	9	6	15
Dentistry	5	5	--	5	13	--	13	--	--	--	1	4	5	19	4	23	5	3	8	16	5	21	21	8	29
Vet. Med.	2	1	--	1	4	--	4	--	1	1	3	2	5	8	3	11	2	2	4	9	5	14	11	7	18
Optometry	2	3	--	3	2	--	2	--	--	--	2	2	4	7	2	9	4	1	5	3	1	4	7	2	9
Podiatry	2	2	--	2	3	1	4	1	--	1	1	2	3	7	3	10	3	10	13	5	1	6	8	11	19
Pharmacy	3	3	--	3	6	--	6	--	--	--	5	6	11	14	6	20	4	3	7	5	4	9	10	7	17
Pub. Hlth. (5)	2	1	--	1	2	1	3	--	--	--	--	1	1	3	2	5	N/A	N/A	N/A	5	5	10	5	5	10
TOTALS	27	28	--	28	45	7	52	1	6	7	27	33	60	101	46	147	31	32	63	67	48	114	98	80	178

(1) Of the 5 Affirmative Action, 4 were university-wide and therefore covered, in three instances, dentistry, and in one instance, pharmacy, as well as medicine.

(2) Includes Registrars, Business Managers, Administrative Assistants, Directors of Special Programs, Centers, Institutes or Grants, Financial Aid Officers.

SUMMARY OF INDIVIDUAL INTERVIEWS (Continued)

Individual Student Interviews																		Intern & Resident Interviews									Total Respondents		
1st Year			2nd Year			3rd Year			4th Year			Unknown Or "Other" Students			Total Individual Students (3)			Site Admin.			Interns & Residents			Total Admin., Interns & Residents					
M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
6	21	27	4	13	17	2	9	11	1	5	6	2	13	15	15	61	76	3	1	4	9	11	20	12	12	24	86	132	218
3	3	6	1	2	3	2	4	6	--	1	1	--	--	--	6	10	16	←				N/A				→	26	17	43
1	7	8	5	9	14	1	--	1	2	7	9	4	1	5	13	24	37	1	--	1	--	2	2	1	1	2	54	37	91
5	4	9	2	5	7	--	4	4	--	2	2	--	1	1	7	16	23	1	--	1	2	3	5	3	3	6	29	29	58
--	4	4	1	5	6	3	2	5	1	5	6	--	--	--	5	16	21	←				N/A				→	19	20	39
--	1	1	--	2	2	1	2	3	4	2	6	--	--	--	5	7	12	1	--	1	3	--	3	4	--	4	24	21	45
--	1	1	--	5	5	1	7	8	1	2	3	6	7(4)	13(4)	8	22	30	←				N/A				→	32	35	66
6	7	13	--	--	--	--	--	--	--	--	--	--	--	--	6	7	13	1	--	1	2	4	6	3	4	7	17	18	35
21	48	69	13	41	54	10	28	38	9	24	33	12	22	34	65	163	228	7	--	7	16	20	36	23	20	43	287	309	595

(3) Male students were not a key respondent group in the study until after submission of the Interim Report at which time the study's focus was expanded to include them in greater numbers. The imbalance between male and female student interviews remains because URSA visited half of the schools in the study (14 of 27) prior to the Interim Report.

(4) Includes 1 fifth-year and 1 sixth-year student.

(5) Hospital Administration and Epidemiology faculty and students combined. Due to varying lengths of training programs, all Public Health students arbitrarily counted as first-year students.

MODVOPPP GROUP INTERVIEW SUMMARY

	Male		Female		Mixed		Total	
	# of Groups	Estimated Average N=7	# of Groups	Estimated Average N=7	# of Groups	Estimated Average N=8	# of Groups	Estimated Total
Medicine	4	28	13	91	--	--	17	119
Osteo. Med.	3	21	3	21	1	8	7	50
Dentistry	1	7	8	56	1	8	10	71
Vet. Med.	--	--	5	35	3	24	8	59
Optometry	2	14	3	21	1	8	6	43
Podiatry	1	7	2	14	--	--	3	21
Pharmacy	2	14	6	42	1	8	9	64
Pub. Hlth.	1	7	1	7	--	--	2	14
TOTAL	14	98	41	287	7	56	62	441